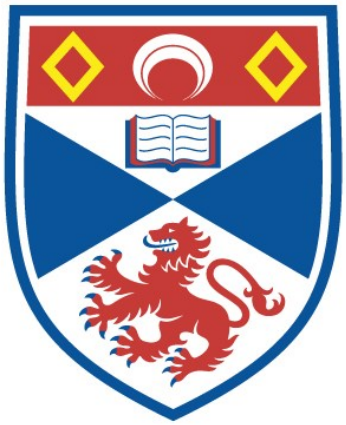
PROVISIONS FOR VISUALLY IMPAIRED PEOPLE IN MUSEUMS AND GALLERIES IN SCOTLAND : AN INVESTIGATION

Heather L. J. Smith

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



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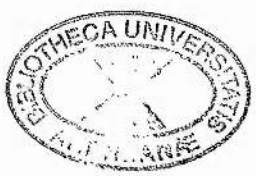

SEPTEMBER 2002

DECLARATIONS

I, **Heather Jacqueline Louise Smith**, hereby certify that this thesis, which is approximately 100,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree

date 30th September 2002 signature

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ABSTRACT

This investigation aims to assess issues of physical, sensory and intellectual access to museums and galleries in Scotland, with a particular relevance to people with sight difficulties.

The research has been completed from the point of view of the visually impaired visitor, using original fieldwork comprising visits to museums accompanied by people with different types of sight difficulties. An examination of the facilities provided has been undertaken from the visitors' perspective alongside the current and forthcoming legislative requirements. The opinions of the museums' community have been taken into consideration primarily by discussions with the curators of the museums and galleries visited.

An appreciation of the legislative stimulus for museums and galleries to consider people with disabilities, the Disability Discrimination Act 1995, is also attempted, including reports from the MPs involved in the development and the introduction of this legislation and the MSPs with responsibilities for the representation of people with disabilities in the Scottish Parliament. A particular focus is applied to the introduction of Part III of the legislation which was enacted during the research period and used as a stimulus for the areas of questioning with the visually impaired people who assisted. This facilitates the presentation of a context against which to place the findings of the discussions with visually impaired people.

Visitors are an essential requirement for the existence and future of museums and galleries and the potential audience of people with visual impairments is increasing and significant.

CONTENTS

ABBREVIATIONS

NB - 'museum' is used throughout to represent both 'museum' and 'gallery'.

The ADAPT Trust	Access for Disabled People to Arts Premises Today
DCMS	Department for Culture, Media and Sport
DDA	Disability Discrimination Act 1995
DRC	Disability Rights Commission
DRTF	Disability Rights Task Force
ICT	Information Communication Technology
INTACT	Intellectual Access Trust
MA	Museums Association
MAGDA	Museums And Galleries Disability Association
MGC	Museums and Galleries Commission
NMS	National Museums of Scotland
RESOURCE	Council for Museums, Archives and Libraries
RNIB	Royal National Institute for the Blind

RRA	Race Relations Act 1976
SAC	Scottish Arts Council
SCRAN	Scottish Cultural Resources Access Network
SDA	Sex Discrimination Act 1975
SMC	Scottish Museums Council
UMIST	University of Manchester Institute of Science and Technology
VISSES	Visual Impairment Services South East Scotland

LIST OF MAPS[1]

[1] All maps originatd by myself from stencils, with boundaries and places drawn freehand as close as possible for accuracy to c.1990

LIST OF FIGURES

Chapter 1

INTRODUCTION: CONTEXT AND METHODOLOGY

CONTEXT

During the first couple of years of blindness, when I thought about the people I knew, they fell into two groups. There were those with faces, and those without faces. It was a bit like wandering round the National Portrait Gallery. Here are rows of portraits, but here is a blank. You can tell where it used to hang by the outline of the wallpaper, and beneath the space is a little label giving the name. Perhaps this portrait is on loan elsewhere, or perhaps it is being repaired.

The people I knew before I lost my sight have faces but the people I have met since then do not have faces. I used to find the contrast between the two groups of people disturbed me. I could not relate one set to the other set. I knew how I knew the first lot - by their faces. How could I ever feel that I really knew the second lot?

As time went by, the proportion of people with no faces increased. Whole rooms are now bare, and the portraits which remain are covered with dust. Is it possible that some day I will come to visit the gallery and find the door locked, with a notice which says, 'This exhibition is permanently closed'?[1]

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[1] J. M. Hull, *On Sight and Insight, A Journey into the World of Blindness*, Oxford, 2001, "Faces, 21st June 1983", p.14

For many people with disabilities, exhibitions and museums are completely 'closed', despite the museum doors themselves being open. Issues relating to museum funding and the perils of museum closure continue to rise and fall in the public consciousness but for some sectors of their potential audience, museums can be 'closed' intellectually, sensorially and physically, despite the issue of availability of funding. Without efforts to redress this balance, exhibitions and museums will not attract these sectors of the potential audience in any number or provide an enjoyable visit for them. In the current political climate, the opposite of this eventuality is desired.

The Universal Declaration of Human Rights states that everyone has the right to freely enjoy the artistic and cultural life of the community.[2] In the United Kingdom, in excess of 8 million people with disabilities are denied the opportunity to "freely" visit a museum however, without alterations being made to the existing buildings or consideration being given to the methods of presentation of the collections and exhibitions. The traditional methods of exhibition presentation, using glass cases, labels, printed catalogues, and similar, need not necessarily be completely changed but alternatives and alterations need to be considered to encourage diversity in the audience. This will satisfy the current attitude of a large proportion of society that people with disabilities should be welcomed and provided for in public services, as they are part of the public, and will also ensure compliance with Part III of the Disability Discrimination Act 1995 (DDA), the legislation which must be followed by service providers.

The last decade of the twentieth century saw an increased momentum for an 'inclusive' society. The pro-active nature of organisations with memberships from people in society traditionally known as being in the minority, stimulated in part by activities in other countries, brought issues into the forefront of society which had perhaps either existed previously but had lain

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[2] Universal Declaration of Human Rights, Article 27.1

dormant for the most part, or had existed but not been acted upon with enough vigour to engage a period of change. As momentum amongst people with disabilities has gathered pace, museums and all public bodies have had to re-assess the way their service is presented and accessed by the people who visit or use it. Similarly, the Government has been required to develop legislative policy to satisfy the call for change. Previous Acts of Parliament relating to Disability have now been superceded by the advent of the aforementioned DDA[3]. This Act will not be fully implemented until 2004, when "reasonable adjustments" will have to be made to physical premises. The initial stage of implementation on 2nd December 1996 'required a decrease in the discrimination against people with disabilities', and the second stage, implemented on 1st October 1999, required "reasonable adjustments" to be made to the presentation of services to people with disabilities.[4] Whilst this introduction in stages is unusual, and unacceptable to disabled people, it perhaps indicates the size of the problem confronting society as it tries to provide equal opportunity for all its members.

DEVELOPMENT OF THE MUSEUM

The social, political and economic background against which museums and galleries evolved was bound to affect the contents of the institutions and the type of visitors they attracted. In the eighteenth and nineteenth centuries, the viewing public was very specialised. Visiting a museum relied to some extent upon access to transport, knowledge and interest.

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[3] These issues will be explained more fully in chapter 3. The earliest disability legislation came into force in the 1940s and was last updated in 1970 prior to the DDA in 1995. Discrimination was not defined in detail before 1995.I

[4] See chapter 3 t is widely reported and assumed in many sources used in this thesis that the Americans with Disabilities Act of 1990 motivated both politicians and people with disabilities in British society, alongside the European Convention for Human Rights.

> Genteel people, who can amuse themselves every day throughout the year, do not frequent the Louvre on a Sunday. You can't see the pictures well, and are pushed and elbowed by all sorts of low-bred creatures. Yesterday there were at the very least two hundred common soldiers in the place - little vulgar ruffians, with red breeches and three halfpence a day, examining the pictures in company with fifteen hundred *grisettes*, two thousand liberated shop-boys, eighteen hundred and forty-one artist-apprentices, half a dozen of livery servants, and many scores of fellows with caps and jackets, and copper-colored countenances and gold earrings, and large ugly hands, that are hammering or weaving or filing all the week.[5]

Some disabled people in the twentieth and twenty-first centuries would argue that they are perceived in a similar way to the *'low-bred creatures'* by today's equivalent of the '*genteel people*' who visit museums and galleries. During this period of time, the role and style of art has again developed against the social and political background, as has the position of people with disabilities.

> A museum is like a living organism; it requires continual and tender care; it must grow or it will perish.[6]

Over the years, the Museums Association (MA) has refined its definition as to what a museum actually is. The responsibility to the public has always remained however:

> A museum is an institution which collects, documents, preserves, exhibits, and interprets material evidence and associated information for the public benefit.[7]

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[5] E. Gilmore Holt (ed.), *The Triumph of Art for the Public 1785-1848, The Emerging Role of Exhibitions and Critics*, Princeton, 1983, p.346

[6] S. Tait, *Palaces of Discovery - The Changing World of Britain's Museums*, London, 1989, p.1

[7] Museums Association 1984

> "Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society.[8]

Museums are no longer just there to be visited by the public but to provide a 'benefit' for them, to enable them to explore collections for their education, for example. Museums have had this aim since their origins as cabinets of curiosities developed into places where people could come to be educated about the contents.[9] The cabinets started as the collections of the rich but, as the displays developed, people from other levels of society were allowed access so that they could learn. What does this really mean for a museum and its place in society? At the International conference, *Museums 2000 - Politics, People, Professionals and Profit*, held in London in May 1989, which was obviously looking to the future, it was stated that museums should cater for:

> ...the whole of the available population of the museum's territory, not just those who chose and are able to use the museum and its facilities without any actual or self-perceived limitations of access (whether because of geographical, physical, educational, or financial restrictions.)[10]

It seems, therefore, that museums should be intent on serving everyone.[11]

> Here I would like to point out that we are not 'the public'. We are many 'publics' - there is no 'the public' - and we are not passive.[12]

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[8] Museums Association 1998

[9] T. Bennett, "Pedagogic Objects, Clean Eyes, and Popular Instruction: On Sensory Regimes and Museum Didactics", *Configurations* vol. 6, London, p.358

[10] P. Boylan, as cited in P. Boylan, (ed.), *Museums 2000*, London, 1992, p.12

[11] Ibid., p.3 - Patrick Boylan, Centenary President of the Museums Association, stated that there were four areas of interest for museums, all of which in some way related to the public: professional support; publication, research and information; parliamentary affairs; public affairs.

[12] Ibid., p.63

Museums will therefore have many issues to contend with if they are to be accessible to 'the public'. The recent legal and societal developments alluded to above have shown that one important 'public' is disabled people, and so museums, along with all other institutions large or small, have to recognise the importance of providing for them. The museum is primarily a visual medium and this thesis attempts to assess the difficulties, particularly of those with problems accessing information visually, in visiting a museum, and the difficulties a museum has in providing for them. A 'lack of ability' within society is certainly felt by people who have difficulties with sight: functioning in daily life is complex in a society which is not geared to accommodate those whose ability to cope with barriers is less than average. Do museums have a responsibility to consider everybody intentionally? Their professional association seems to believe so:

> Museums have the generosity of spirit to be approachable at every point of contact, to reach out to audiences and to increase access to their collections. As educational institutions, museums encourage a participative approach to learning. However specialised their subjects or remote their locations, they develop new audiences and deepen relationships with existing users. Museums recognise that individuals have varied backgrounds and varying physical, intellectual and cultural needs and expectations.[13]

DISABILITY

If a museum is to make itself more accessible to disabled people it has to know the needs of people with disabilities. The term 'disabled' itself has developed negative connotations and dictionary definitions certainly enforce

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[13] MA, *Code of Ethics*, London, 2001, p.11, Section 3.0

this. 'Disabled' is usually defined as in some way "incapable of action"[14] and 'disability' as having some "want of ability" or "inability".[15] The latter definition in one dictionary also states that disability can be regulated by the law.[16] The DDA has conceived a legal definition for the term[17] but, particularly in the case of visual impairment, there are many people who might not qualify by means of a legal definition but who do have degrees of sight loss, who clamour for recognition and opportunities from museums.

There have always been people within the population with disabilities, even when

> ...in the major arts the Greeks and, to a lesser degree, the Romans present to the outsider's gaze an image of physiological perfection which is so consistent and so unwavering that it virtually denies the possibility of the accidental and true-to-life deficiencies of authentic human anatomy.[18]

Disabilities were allegedly shown in some of the deities,[19] and there were occurrences, recorded in literature, of people with less than

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[14] J. A. Simpson and E. S. C. Weiner (ed.), *Oxford English Dictionary*, 2nd ed, Oxford, 1989, Vol. IV Creel - Duzepere, p.714
p.713 - disable - to render unable or incapable; to deprive of ability, physical or mental, to incapacitate; 2) to incapacitate legally; to pronounce legally incapable; to hinder or restrain (any person or class of persons) from performing acts or enjoying nights which would otherwise be open to them; to disqualify 3) to pronounce incapable; hence, to disparage, depreciate, detract from, belittle; to depreciate one's own competence or fitness for an appointment or honour (chiefly as a conventional tribute to modesty) 4) to make or pronounce of no force or validity.
[15] J. A. Simpson and E. S. C. Weiner (ed.), *Oxford English Dictionary*, 2nd ed, Vol. IV, p.713
[16] Ibid., p.713 - incapacity in the eye of the law or created by the law; a restriction framed to prevent any person or class of persons from sharing in duties or privileges which would otherwise be open to them; legal disqualification.
[17] See chapter 3 for the DDA definition.
[18] R. Garland, *The Eye of the Beholder, Deformity and Disability in the Greco-Roman World*, London, 1995, p.viii
[19] Ibid., p.x; as cited in F. Schatz, *Die griechischen Gotter und die menschlichen Missgeburten*, Wiesbaden, 1901. Demi-gods were inspired by observations of genuine malformations - Hephaestos (lame), Atlas (hernia on the brain)

'physiological perfection', primarily in the world of entertainment.[20] This provokes questions as to whether status in the family and society, the age of acquiring a disability, and the adjustment to coping with the physical world were perceived in similar terms then as now. The answers we could give would say a lot about contemporary society.

One of the major issues for disabled people is the presentation and the understanding of the definition of disability. They draw attention to the 'medical model' and 'social model' method of defining a disability.

The Union of the Physically Impaired Against Segregation are credited with defining what are now termed the medical and social models of disability in the *Fundamental Principles* document of 1976. The models were grown from a definition between the impairment and disability, namely that the impairment was part of the person and disability caused by society. This group was formed in the early 1970s and proved to be the catalyst for others, especially after the adoption in 1975 of the United Nations Declaration of Rights of Disabled Persons.[21] There were over ninety groups similar to the Union of Physically Impaired Against Segregation by 1990 and this led to the formation of the British Council of Organisations of Disabled People.[22] Such moves were also instrumental in the formation of the DDA by lobbying the government.

The medical model went through several transformations before settling with the current preferred title. The personal tragedy theory of disability is preferred as a title by Mike Oliver, although he acknowledges a medicalisation

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[20]. R. Garland, *The Eye of the Beholder, Deformity and Disability in the Greco-Roman World*, 1995, p.32 for representations of how the Ancients did utilise disabilities in public rituals, social institutions, myth, literature and art. The popularity of vase-paintings and statuettes showing characters such as deformed dwarfs, hunchbacks and obese women as dancers, musicians, jugglers, clowns.

[21] M. Oliver, *Understanding Disability - From Theory to Practice*, London, 1996, p.148. Also see p.2 above for mention of the Universal Declaration of Human Rights.

[22] Ibid., p.148

of this theory to form a medical model.[23] This tragedy theory encourages the view that the person with the impairment is so traumatised that they are unable to gain a quality of life for themselves. This is increasingly becoming unacceptable. The medical model focuses on the impairment of the person, the fact that they have "...non-operative' bits of their bodies or bodily systems",[24] as the reason for the perception of disability, and for the belief that they cannot take a full part in society.

People with disabilities had already seen that legislation in issues of gender and race had been brought to pass after pressure had been applied to government representatives by groups seeking equality. It was important to those seeking change to be involved in the activity. However, such change is never easy and government time pressure is always spread across other areas.[25] The people with disabilities who involve themselves in the public struggle for equal opportunities, be it through legislation or a change in people's attitudes, are those who believe that they can live independent lives, and find their difficulties in the barriers created for a world of people without disabilities. This position has given rise to the development of what has come to be known as the social model, suggesting that the fact of a person's disability need not be a primary factor in their enjoyment of the world around them.

The difficulties in gaining acceptance for the social model in the way in which decisions are made stem from many years of looking at people with disabilities in the light of this medical model. The social model can be defined as all things that impose restrictions on disabled people, from prejudice, to discrimination, physical access difficulties, transport systems, education and employment arrangements.[26] The social model suggests that it is not a person's impairment which makes them disabled but the barriers that society presents,

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[23] M. Oliver, *Understanding Disability - From Theory to Practice*,1996, p.31
[24] S. Goldsmith, *Designing for the Disabled: The New Paradigm*, London, 1997, p.149
[25] See chapter 3 for further discussion of disability legislation.
[26] M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.33

for example in the case of museums and people with visual impairments, the nature of architecture and presentation of information, disenfranchising disabled people from playing a full role in the community. The fact that a person who experiences the social model has an impairment should not be forgotten, as some disabled people fear it is, but it is not the focus of the disabled person's life and does not prevent them taking a role in society providing society allows [27]

The acceptance or even the further education of the social model cannot enact a quick change of fortune for people with disabilities but it can bring about some form of understanding. It is an achievement according to Tom Shakespeare, a journalist and disability activist, that the link between the physical state of the body and the situation in which people with disabilities live has been broken and can perhaps be a catalyst for change.[28]

The point is made by Gerald Hales as to the enormity of the struggle facing people with disabilities. He likens the societal structure as being akin to a feudal society trying to become a democratic society.[29] People with disabilities need to make their voices heard against the prevailing view that people have disabilities therefore cannot participate. The disabilities, impairments, or whatever term given to the way in which people differ from those who would be termed able-bodied, are not as relevant as society looking at the way it presents itself and making simple changes to give people with disabilities change to participate and have their voices heard. Those in power cannot make all the decisions without consultation by the proper means with the relevant people. The majority do not understand the needs of the minority as in a feudal society. People with disabilities going about their everyday business but with an extra encumberance of a disability and society's view as outlined above.[30]

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[27] M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.35
[28] T. Shakespeare, as cited in M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.40
[29] G. Hales (ed.), *Beyond Disability - Towards an Enabling Society*, London, 1996, p.1
[30] Ibid., p.2

Some people would prefer that society would adapt completely and there would be no need for any assistance when visiting a building, for example. In some instances the cost for this might be prohibitive but for some people with disabilities, this would be a true social model response. Intervention and assistance takes away personal choice and freedom.

Societal attitudes to disability seem to vary depending on the disability; if someone has a mental disability people will normally react in a more negative way than if someone has a visual impairment. The Universal Declaration of Human Rights does state that:

> An individual may have an impairment which can be physical, sensory, or intellectual, but their disability is caused not by that impairment, but by the way society is organised.[31]

This in itself suggests that it is society and not any medical reason for a disability which causes the difficulty for people with disabilities. The fieldwork undertaken does show that in many instances, this was an observation made by the volunteers who assisted with this research.

The developments in society discussed in the earlier part of this chapter, with the rise of groups of those traditionally considered to be in the minority in society (in the case of this research, people with disabilities), have given rise to the concepts of social exclusion and social inclusion. What these terms actually mean has been debated for some time. The introduction of the term 'social exclusion' came from Europe and was understood to mean the way in which groups in society can become 'disenfranchised' from the majority of society.[32] However, definitions of the terminology are many, and the role museums can play in combating feelings of exclusion have been the subject of discussion.

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[31] Universal Declaration of Human Rights, Article 27.1

[32] R. Sandell, "Museums as Agents of Social Inclusion", *Museum Management and Curatorship*, vol.17, no.4, pp.401-418, London, 1998, p.401

Within museums, increasing the opportunities for people with disabilities, in a sense moving from a process of social exclusion to social inclusion, can take various forms, be it enhancing the interpretation of an object by adding facilities to touch the piece or redesigning printed literature concerning it. For some, increasing the emphasis on such audience development changes the role of museums, moving from an institution which collects and displays objects to one which has to play a role in a socio-political agenda. For people with disabilities themselves, it is about a basic right of access.

'Exclusion', as opposed to 'social exclusion' can be defined as "something done to some people by other people".[33] In terms of 'social exclusion', the 'other people' are those who are prevented from taking part in society by something or someone. Various definitions of 'social exclusion', which might assist with the definition of the 'some people' and 'other people' in the quotation above, have been proffered. 'Social exclusion' has been traditionally concerned with issues regarding poverty and a deprivation from society in general, but this idea has now been expanded to include a more fulsome definition of 'society', including the "social, economic, political or cultural systems which determine the social integration of a person in society."[34] The use of cultural systems in this definition is of interest for museums.

To negate this process of 'social exclusion' moves have to be made to assess the 'other people' excluded and who or what are the 'some people' who are excluding them. To look at this in relation to museums, the place of what a museum itself can do to combat this is perhaps at first difficult to find.[35] Indeed, there is the school of thought that it is not the responsibility of museums to consider social exclusion, or at least changing their foremost activity

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[33] D. Byrne, *Social Exclusion*, London, 1999, p.1
[34] A. C. Walker et al, *Britain Divided: The Growth of Social Exclusion in the 1980s and 1990s*, London, 1997, p.8, as cited in D. Byrne, *Social Exclusion*, 1999, p.2
[35] R. Sandell, "Museums as Agents of Social Inclusion", *Museum Management and Curatorship*, vol.17, no. 4, 1998, p.403

of increasing the understanding and enjoyment of collections and displays.[36] The Institute of Ideas are the main proponents of this view and go as far as to state that museums are acting as "government pawns" if they attempt to try to include in some way people or audiences who might not be traditional museum visitors.[37]

Despite this view, there is surely a role for institutions such as museums to play in combating the notion of 'social exclusion' as they do form an important part of the cultural sector of society. Museums can represent the cultural heritage of individuals, opportunities for people to participate in cultural production and opportunities for individuals to enjoy cultural services.[38] If museums do not include exhibitions by or working with groups in society who might not usually get such representation, they could be seen, under the cultural terms of social exclusion, as contributing to this process.

Viewed in this light, questions are raised as to how much museums can achieve for groups who might be considered excluded and how much such work might affect the 'traditional role' as it might indeed be termed of museums in caring for collections and continuing their research. Museums need to consider their position and what they stand for, and, with increased limitations on funding from all sides, they have to be accountable to society as a whole.[39] As the emphasis in society has changed, so perhaps museums have to change. This does not mean they have to lose sight of the 'traditional role', but for political and financial survival, a development of the audience has to be considered. The cultural sector is tasked to combat social exclusion, as agencies such as health and education are, but the speed and scale of progress need not necessarily be the same in all, but it should not be ignored.

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[36] K. Raney, "Editorial", in K. Raney.(ed.), "Inclusion under pressure", *engage review*, issue 11, London, Summer 2002, p.5

[37] J. Appleton, "Museums for The People?", 8th November 2001, as cited on website, www.spiked-online.co.uk/Articles/00000002D2BA.htm

[38] R. Sandell, "Museums as Agents of Social Inclusion", *Museum Management and Curatorship*, vol.17, no.4, p.409

[39] Ibid., p.401

Museums can make inroads into turning social exclusion round to a process of inclusion with carefully considered activities. By looking at the components of their audience and working with marginalised groups in their local communities, groups believed to be excluded from a museum audience can be included. An understanding of the types of activities which would be most successful, or the basic improvements to a museum building required, needs to be ascertained. Museum buildings are perhaps "exclusive" in the way they are designed outwardly and inwardly, and there may be a feeling by some groups that they do not belong there. The use of admission fees and similar could be seen as a method of excluding people who cannot afford extras such as this. However, the political activities of the 1970s and 1980s, when museums had to be accountable for their funding and funding itself was decreased, placed emphasis on the quantity of the audience before assessing its composition.[40] It is important to adopt good methodologies and good examples of projects to ensure museums will not be seen to be, and indeed will not, be 'lowering standards', as the Institute of Ideas considers such projects to be.[41]

Museums can therefore play their part in transforming a socially excluded group into a socially included one. A huge difference in the general conception of 'social exclusion' cannot be made as there are other elements which affect social exclusion such as housing, education and health services.[42] However, museums can address social exclusion by combating the issue of access to culture and education and improving the self-worth and understanding of different groups to others. This can be done on a variety of scales, exhibitions, outreach work, or taking up a very public, high-profile stance on one particular issue, but the important thing is that museums can make a difference of some size to the transformation of a socially exclusive society to a socially inclusive one.

[40] R. Sandell, "Museums as Agents of Social Inclusion", *Museum Management and Curatorship*, vol.17, no.4, pp.401-418, London, 1998, p.402

[41] M. O'Neill, "The people versus", K. Raney (ed.), "Inclusion under pressure", *engage review*, issue 11, Summer 2002, p.34

[42] F. Allen as cited in K. Raney (ed.), "Inclusion under pressure", *engage review*, issue 11, Summer 2002, p.5

The issue of interpreting the visual to a visually impaired person is of great importance to this study. There is a school of thought that such interpretation is pointless, but if social inclusion is to be successful the challenge cannot be dismissed in this way.

> Art is usually being seen as the icing on the cake - yet it has the power to reveal to its audience that there may well be no cake at all. Certainly no cake for the arts, nor for visually-impaired people and other minority groups. Visual impairment on one hand, and art on the other, are minor issues in the global political agenda. In the rare instances when these issues are addressed together, one gets the feeling that what results immediately crumbles to dust.[43]

The view taken that people with visual impairments cannot participate in 'normal' life has been proved to be flawed by people in public life who perform duties perceived impossible for people with visual impairments by many fully sighted people. The most famous examples include the Rt Hon. David Blunkett MP, Home Secretary, and the Rt Hon. Gordon Brown MP, Chancellor of the Exchequer.[44] Both continue to accomplish their careers despite their sight difficulties.

If there is to be a move towards equality in society for disabled people, museums need to be able to focus their exhibitions so that disabled people feel at ease, be they physically, sensorially or intellectually disabled in the museum's physical, social, and intellectual surroundings. As already stated, museums "...as a community (cannot) go on ignoring this issue..."[45] but need to assess the worth of providing for visually impaired people, and how to adapt their buildings and exhibitions to provide for a greater public without alienating members of their audience by presenting exhibitions which are inaccessible to them.

[43] M. Weisen, "The unbearable lightness of politics *or* The art of inertia", *New Beacon*, vol.74, no.875, April 1990, p.135 - 137

[44] Rt Hon. David Blunkett MP has been blind since birth, and the Rt Hon. Gordon Brown MP has one glass eye after losing an eye during a rugby accident at university.

[45] P. Boylan (ed.), Museums *2000*, p.63

> A good museum attracts, entertains, arouses curiosity, leads to questioning and thus promotes learning. It is an educational institution that is set up and kept in motion - that it may help the members of the community to become happier, wiser, and more effective human beings. Much can be done toward a realization of these objectives - with simple things - objects of nature and daily life - as well as with objects of great beauty. A museum should also reflect our industries - be stimulating and helpful to our workers and promote interest in the products of our own time. The museum can help people only if they use it; they will use it only if they know about it and only if attention is given to the interpretation of its possessions in terms they, the people, will understand.[46]

'Social exclusion' has been on the political agenda for the duration of the 'New Labour' government. The Department of Culture, Media and Sport has produced policy documents to encourage the involvement in events and institutions of all of society and, within these, museums are encouraged to work for the community. The Museums Association (MA) and the Scottish Museums Council (SMC) have also produced guidelines to assist museums in defining an appropriate response to the DDA and to increase the involvement of areas of the potential audience who might otherwise be excluded. This is just one component of the tasks required to be accomplished but it is an essential one. It is also essential for securing funding to progress new projects within museums, with Lottery funding in part dependent upon the worth of the proposed development for people with disabilities.

Disability is therefore an important issue in museums and the changing political climate in Scotland, particularly at this time, makes it an interesting topic for research. With the advent of a separate Parliament, how Scotland runs its cultural affairs is coming far more under the control of the Scottish people themselves. The 'social inclusion' agenda of the United Kingdom government at Westminster has nevertheless been adopted in

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[46] E. P. Alexander, *Museums in Motion - An Introduction to the History and Functions of Museums*, The American Association for State and Local History, 1979, p.13

Scotland and, similarly, the cultural and museum organisations have made this a central part of their current policies.

Part III of the DDA, *Discrimination in Other Areas - Goods, facilities and services*, was to be enforced in October 1999 and this provided a focus for a PhD thesis at this time. To assess the initial response, both in attitudes towards and actual changes made due to the DDA, and the future implications of the Act, was apposite and provided a strong basis for a wider discussion. The decision to focus more closely on the disability of visual impairment developed from the author's interest in the faculty of sight and the fact that museums are essentially a visual medium and, regarding issues of collections care, this sense is perhaps the most problematic to provide for in the museum environment.

The foundations of this research are built on a previous dissertation by the author, *Beyond the Ramp*, which had been completed in 1998 for the preceding Diploma in Museum and Gallery Studies. This assessed the situation in Fife as the DDA was introduced, the provisions available for people with disabilities and the attitudes of museum professionals and organisations towards it, as well as the opinions of local organisations with memberships of visually impaired people.[47] This was subsequently transferred to a PhD when the obvious scope of the material involved became apparent, because of the gradual introduction of the DDA, and because there is not a representative survey of Scottish museums completed in this way.

The aspiration for this research is to assess the provisions for people with visual impairments in museums in Scotland by asking the people themselves. The aim is to assist the museum profession by articulating initiatives which could be taken to improve the visiting experience particularly for people with visual impairments, and consequently to address issues of social exclusion. It is hoped to present the situation as perceived by visually impaired

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[47] H. J. L. Smith, "Beyond the Ramp", Museums and Galleries Diploma dissertation, University of St Andrews, 1998

visitors with the intention of assisting the museum profession to increase their audience participation from this community. I hope this will prove instructive to the museum profession.

METHODOLOGY

The thesis divides in the main into two sections, the Context and the Fieldwork. The context involves an examination of visual impairment and what providing for people with sight loss might mean for museums. This is reinforced by an evaluation of the legislative framework which requires increased provisions for disabled people within society, and therefore people with visual impairments within museums. In relation to this, fieldwork was used to assess the success of museums so far in catering for an audience with visual impairments.

Chapter 2 discusses the various levels of visual impairment and therefore the difficulties these present for a museum, and also the terminology used which can be difficult for those who do not have a visual impairment. The very issue of what a museum is has to be considered to understand what a visitor should gain from a visit and the type of provisions a museum does, and should, make for people with visual impairments. How a 'visually impaired person' is defined can affect the approach to the provision of appropriate facilities. As a background to understanding 'visual impairment', it is important to gain a basic medical perspective. There are various levels of visual impairment and many reasons for their inception; visual impairment can often be accompanied by other disabilities. The use of terminology such as 'visual impairment' is also a matter of debate. To confirm medical definitions of visual impairments and to discover reasons for such conditions, a world-renowned eye surgeon, Emanuel Rosen, was contacted and, upon his advice, the Department of Optometry and Vision Sciences of the University of Manchester Institute of Science and Technology (UMIST). One particular type of visual impairment is 'colour blindness'. Understanding of this condition was gained by contacting UMIST and the University of St Andrews Department of Psychology. The development of the profile and numbers of people with disabilities, as well as with visual impairments specifically, has an effect on the provisions that are likely

to be made and on the response to them.

In chapter 3, the DDA and the stages of its implementation are discussed. The focus is primarily on the introduction of Part III, the section relevant to service providers, as this is of significance to museums and has been introduced and implemented during the lifetime of this thesis. To understand why it takes the form it does, it was necessary to contact those concerned in its development. Approaches were made by correspondence with relevant MPs.[48] To assess the situation in a devolved Scotland, with the DDA reserved legislation, MSPs with responsibilities for equal opportunities were contacted, and those with responsibilities for Culture, including the Deputy Minister for Culture, Media and Sport. Information was also sought from the Disability Rights Task Force. The report produced by the Task Force assesses the practicalities of the DDA and the function it provided. Museum organisations produce their own advisory policy documents for their members. The relevant documents in Scotland, and in Britain in general, are assessed in light of the government legislation, and society's views.

Chapter 4 introduces the fieldwork undertaken for this research with an assessment of the type of exhibitions which could be accessed more easily by people with visual impairments. Some were designed by people with visual impairments, some contained artwork by people with visual impairments, and some were access initiatives by particular institutions. In the light of the discovery of these exhibitions during the fieldwork, a quantitative survey is made of the two major journals of relevance to the topic of the thesis, the *Museums Journal*, the major periodical for museum professionals in the UK, and the *New Beacon*, the primary journal of the Royal National Institute for the Blind (RNIB). The *Museums Bulletin* and the *Museums Practice*, two other publications of the MA are also reviewed in a similar manner. The *Museums Journal* (and the *Museums Bulletin* and *Museums Practice*, for the period of their publication) are examined over the past two decades to gain an

[48] See Appendix D for details of those MPs and MSPs contacted.

understanding of the place of disability issues for museums and whether this has changed during and after the period of introduction of the DDA. The *New Beacon* is assessed in a similar light to understand how much information about museums was presented in a journal read specifically by visually impaired people.

METHODOLOGY OF THE SURVEY

The second part of the thesis involves a discussion of the fieldwork. Several choices had to be made when deciding how this study could be conducted to best effect. The choice of museums and galleries for inclusion would affect the geographical content and depth of the analysis in relation to Scotland as a whole. The way that participants were chosen for the fieldwork would affect the type of analytical method selected for the resultant information and perhaps even the nature of the responses given. The timing of the research, in relation to the method of introduction of the DDA, would qualify the nature of the comments on this piece of legislation, not fully enacted until 2004.

METHOD OF GATHERING RESEARCH DATA

The first consideration to collect data was a questionnaire which could be evaluated statistically. This type of analysis had already been experimented with in the previous study. Questions were used here to assess the number of visitor figures and types of provisions for disabled people, and there were also closed 'yes and no' questions, where answers could be predetermined and therefore easily tabulated.[49]

In this particular research, there were several difficulties with this type of evaluation. A typical quantitative method using a printed questionnaire might not be appropriate for a museum service already inundated by

[49] See Appendix C for a copy of the questionnaire.

questionnaires and other information on paper at the present time. The likelihood of receiving completed questionnaires from all the organisations chosen to survey across Scotland was uncertain. Even a reasonable percentage could not be assured. To harass already tightly scheduled museum professionals may have resulted in unconsidered completion of the questionnaires, thus potentially nullifying the data. Over the smaller area of Fife, this type of evaluation was quite fruitful but there were still instances where curators had to be persuaded to provide responses and this was still not consistently successful.

A questionnaire of the size and nature required to gather all the information necessary for this study could have made excessive demand on people with visual impairments. The people who might volunteer to help would be giving up their time freely and might consider the completion of such questionnaires too time-consuming. The questionnaires themselves would also have to be prepared in formats alternative to text to ensure they were appropriate for the different volunteers. Questions could be Brailled and responses translated by a volunteer who read Braille, or tapes could be produced and the answers returned on a blank tape, provided along with the tape containing the questions. This would have been quite an imposition on a volunteer, without substantial personal contact beforehand, and would be even more time-consuming for them. Visits to the museums themselves would deliver the most useful information for research into provisions made for visitors with visual impairments so it was decided to concentrate on these.

Using people as the data source was the best way to complete this research which aimed primarily to understand the perspective of a museum visit from a museum visitor. Consent was gained from each participant before the visit about the nature of the research and whether they would be happy to be quoted or whether they would prefer anonymity within the text. They were asked to provide their own definition of their visual impairment which they would be happy to be reproduced.

Qualitative evaluation was, therefore, the option finally selected for the major part of this research. There are several methods of collecting qualitative information and, as the participants would be visually impaired people working independently from one another, i.e. not all visiting every museum together, the method of interview was chosen. Jennifer Mason states that

> 'qualitative interviewing' is usually intended to refer to in-depth, semi-structured or loosely structured forms of interviewing[50]

As such, the interviews could be a formal question-and-answer-type format, quite informal with a focus on more general topics or themes, or less directed and open style.[51] In this instance, a structured interview was felt to be quite restrictive in the responses it might create, and it might prevent some of the discussion which would be most informative about certain issues from taking place. The interviews were to take place during museum visits so a formal situation would not be the easiest option to administer whilst moving round the building. An unstructured interview did not provide for enough control over the topics to be discussed in the short time-scale for each interview.[52] Whilst not formulating a strict question-and-answer basis, it was important to keep some control over the information being sought and to maintain a similar approach for each visit.

A semi-structured approach seemed most appropriate, considering the same series of topic areas on each visit,[53] during each interview and these now form the chapter headings of chapters 6 - 12. These topics were considered when formulating the initial research plan from an earlier dissertation completed for the previous Diploma. The topics were also

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[50] J. Mason, *Qualitative Methodology*, London, 1996, p.38
[51] A. Fontana and J. H. Frey, Chapter 22 "Interviewing: The Art of Science", in N. K. Denzin and Y. S. Lincoln, *Handbook of Qualitative Research*, London, 1994, p.361
[52] Ibid., p.366
[53] J. Mason, *Qualitative Methodology*, 1996, p.44

considered from visits to museums before starting the research as likely points of difficulty or interest in conducting a museum visit in general, not necessarily with a visual impairment. The aim of the research was to have 'normal' museum visits and to assess what the experience was like for people with visual impairments. The topics set had to be carefully considered and to fit within an estimated time-scale for each visit.[54] Volunteers were giving of their time freely and it may be difficult for some to maintain a long visit. The topics chosen had to be easily understandable and suitable for the range of venues expected for the research to maintain a consistency and a validity to the research. It seemed most sensible to begin with the exterior of the museum and then move on to issues concerning the vertical and lateral circulation around the building and finally issues relevant to the exhibitions themselves.[55]

By not pre-judging areas of questioning rigidly as in a structured interview, the semi-structured interview style would enable fluidity between the topics and allow for any further discussion of relevant areas.[56] The topics would be introduced in the order outlined in the above paragraph, but the more fluid approach would increase the validity of the research as it allowed for the fact that people with visual impairments are all different and the differences, if any, within the topics discussed could be fully appreciated with a more conversational style. Should any volunteer mention something relevant to the topic of text when questioned about architecture, for example, this would not affect the validity of the research.

To maintain the semi-formal setting, a friendly tone was maintained throughout the visits to keep volunteers at ease and to try to prevent the feeling that they were being "interviewed". This was in the endeavour to prevent people feeling like they should give set answers.[57] This eventuality cannot

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[54] J. Mason, *Qualitative Methodology*, 1996, p.32
[55] See Appendix G for a transcript of one of these interviews.
[56] J. Mason, *Qualitative Methodology*, 1996, p.148
[57] A. Fontana and J. H. Frey, Chapter 22, "Interviewing: The Art of Science", in N. K. Denzin and Y. S. Lincoln, *Handbook of Qualitative Research*, 1994, p.371

really be negated but every effort was made here to maintain the atmosphere of a relaxed visit, discussing relevant points which arose within the topics previously selected.

The results of the visits were recorded onto dictaphones and then transcribed onto computer after the visit was completed. The use of a dictaphone meant a free conversation could be maintained without the need to keep stopping to write down responses. There are potential difficulties with the use of a dictaphone or similar recording equipment in that the interviewer could stop listening and therefore might neglect to ensure all questions are asked. This was avoided in this instance by maintaining a disciplined approach to each interview, completing only one in a day to ensure there was no confusion between each visit by trying to do them all too quickly, and ensuring that the topics to be discussed were thoroughly understood beforehand, and a list of them was taken to every interview to ensure each volunteer covered the same areas. Recording speech meant that the content of the visit would not be lost to illegible speed-writing and a dictaphone was more practical for an interview 'on the move' and was particularly useful to verify comments in later analysis. It also ensured that memory was not relied upon to retrieve the information about each visit and this also assisted removing any bias in recalling some information before other.

Sourcing suitable volunteers proved difficult in as much as there was no one organisation or group to ask for assistance. RNIB organisations were used as much as possible but these were not always able to provide assistance. The only practical option in this instance was to use those people highlighted by the different organisations for the museum visits. This could have caused potential difficulties but perhaps highlighted an issue, which the research could embellish, of the difficulties of easily finding people to help museums assess their provisions for visually impaired people. The volunteers who did help, as it happened, all had slightly different visual impairments so were able to

provide information from a variety of standpoints, so the potential difficulty of everybody having the same impairment was prevented.[58]

There was a desire to achieve a representative sample of museums and a representative sample of visually impaired people for this research. It is important that 'representative' is understood in terms of the population and area in which the research was conducted. A representative sample here would be of people with visual impairments in Scotland, and museums in Scotland.[59] In the terms of Jennifer Mason, this research perhaps encompasses a 'relevant range' of people with visual impairments and of museums from different regions in Scotland.[60] There was a range of people with visual impairments and of museums in Scotland but the time-scale, resources and possibilities of volunteers for the project perhaps hinders a definition of 'representative'. However, the ranges used can be reflected back onto the wider population of people with visual impairments and museums by their diversity.

The museums used in this survey were selected on the basis of a desire to achieve a range of types. The decision to use museums of a variety of types, National, Local Authority, University, and Independent, facilitated this outcome even within a total number which was only a fraction of the 400 possible.[61] Consideration of time-scale and resources, was also necessary and the availability of volunteers would influence the areas covered.

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[58] J. Mason, *Qualitative Methodology*, 1996, p.103
[59] Ibid., p.86
[60] Ibid., p.91
[61] Appendix A lists the museums, their types and range over the country, indicating that examples were selected from almost every region in Scotland.

Museums and galleries visited were:

Highland :-

Inverness Museum and Art Gallery

Grampian:-

Aberdeen Art Gallery
Marischal Museum, Aberdeen

Tayside:-

Dundee Contemporary Arts
McManus Galleries, Dundee
Perth Museum and Art Gallery
J. D. Fergusson Gallery, Perth

Fife:-

Laing Museum, Newburgh
British Golf Museum, St Andrews
Crawford Arts Centre, St Andrews
St Andrews Museum
St Andrews Preservation Trust Museum
Fife Folk Museum, Ceres
Crail Museum
Scottish Fisheries Museum, Anstruther
Buckhaven Museum
Corridor Gallery, Glenrothes
McDouall Stuart Cave, Kirkcaldy
Kirkcaldy Museum and Art Gallery
Burntisland Museum

Inverkeithing Museum
Dunfermline Museum and Art Gallery
Pittencrieff House Museum, Dunfermline
Andrew Carnegie Birthplace Museum, Dunfermline

Central:-

Smith Museum and Art Gallery, Stirling

Lothian:-

Talbot Rice Gallery, Edinburgh
Royal Museum of Scotland, Edinburgh
Museum of Scotland, Edinburgh
National Gallery of Scotland, Edinburgh
Scottish National Portrait Gallery, Edinburgh
Museum of Childhood, Edinburgh
Stills Gallery, Edinburgh
Collective Gallery, Edinburgh
City Art Centre, Edinburgh
The Writers Museum, Edinburgh

Strathclyde:-

Collins Gallery, Glasgow
Gallery of Modern Art, Glasgow
Kelvingrove Museum and Art Gallery, Glasgow

Dumfries and Galloway:-

Gracefield Arts Centre, Dumfries

VOLUNTEERS

It was important to determine the organisation of the volunteers in the initial stage to evaluate the quality of the potential material for this thesis. The visits were therefore completed in 1998 and early 1999. The timing of the visits also had to be coordinated with the availability of the volunteers. It was difficult to organise more than one visit with each volunteer due, in some instances, to their preconceived views about museums. These included feeling that museums were not for them, and perhaps primarily for some people, the difficulty and effort involved in dealing with the disability itself, leaving little energy and inclination to visit leisure activities. The same situation and responses could not be replicated completely without a volunteer but "follow up" visits were completed to assess either the same museums one year on, for example, or to assess new museums informed by the volunteers' comments. The follow up visits were conducted mostly in 2000, after the introduction of Part III of the DDA, enabling an assessment as to whether any recommendations mentioned therein had been put in place.

It was necessary to make contact with a variety of groups and individuals to facilitate this research. This was achieved by approaching both museums, to see if they had any visitor contacts, and/or organisations who had a responsibility for, or a membership which included, people with visual impairments. The volunteers did not necessarily have to be previous or regular museum visitors, however, only to be interested in offering their opinions on the experience of a museum visit. It was hoped this stipulation would receive objective responses, not purely comments from museum-lovers, or indeed the opposite. The size of the sample could only be determined by the number of replies and the interest shown in the project.

The initial contacts were made with the RNIB, the Museums and Galleries Disability Association (MAGDA), Disability Scotland, the Museums and Galleries Commission (MGC), the Scottish Museums Council (SMC), and

The Access for Disabled People to Arts Premises Today Trust (The ADAPT Trust). These provided invaluable advice and contacts to pursue the research further.

Grampian

The Grampian Society for the Blind was able to provide one volunteer, this time from its staff, to assist with two museum visits in Aberdeen.

Tayside

The Dundee Society for Visually Impaired People produced useful focus-group work and one member agreed to assist with museum visiting in Dundee. Perth Society for the Blind unfortunately could not encourage anyone to volunteer.

Fife

Local contacts had already been made for the survey undertaken for the earlier dissertation. Fife Society for the Blind established local interest and procured helpful contacts with two volunteers who were prepared to assist with museum visiting. Unfortunately, the museums within Fife did not prove suitable to visit for the blind volunteer, nor was the second volunteer able to provide the necessary assistance when required.

Lothian

Visual Impairment Services South East Scotland (VISSES) in Edinburgh was able to provide a volunteer from its staff to survey Edinburgh museums. The National Museums of Scotland (NMS) facilitated visits with a member of its Access Working Group. Another volunteer was found to help in Edinburgh through separate contacts. The greater number of volunteers in Edinburgh was perhaps to be expected due to the city's larger population and its greater number of museums. Meeting with a large number of visually impaired people with an interest in museums was possible at the NMS with

attendance at focus group meetings with people prepared to act as guides to accompany the exhibition, 'Blind Alphabet C'.[62]

Strathclyde

Kelvingrove Museum and Art Gallery was able to become part of the project by hosting a conference organised in conjunction with *Dialogue in the Dark*, an exhibition for sighted people, organised and led by visually impaired people.[63] Participants were encouraged to gain a 'feel' for the world of visually impaired people and spectacles which simulated visual impairments were offered to demonstrate an appreciation. but not an absolutely accurate representation, of the difficulties faced by people with sight difficulties visiting museums.[64] Observations about Kelvingrove had to be balanced carefully with information gained on other visits to ensure as true a representation of the views of visually impaired people as possible.

The option of using "sight-reducing glasses"[65] was considered for the visits which were completed without a volunteer, but was rejected after consideration of the view that the volunteers who were able to help with this research held of this practise. They did not see the merit in something which gave a false impression to the participant that they had gained an understanding of visual impairment. Suddenly plunging oneself into a situation of what would appear to be disorientation would invoke a sense of fear in a sighted person and a false impression as to the really difficult issues people with visual impairments face. Visually impaired people develop coping strategies, and these would not be in existence in a sighted person wearing these goggles, so an inaccurate impression of a visit to a museum could be engendered.[66] There

[62] See chapter 4 for more details about this exhibition.
[63] See chapter 4 for more details about this exhibition.
[64] S. French, Chapter 11, "Simulation exercises in disability awareness training: a critique", in M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.117.
[65] S. French, Chapter 11, "Simulation exercises in disability awareness training: a critique", in M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.115
[66] S. French, Chapter 11, "Simulation exercises in disability awareness training: a critique", in M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.117

is a danger that the attitudes and biases of the interviewer wearing the sight-reducing glasses would come through and dominate how this museum was considered, rather than using the opinions of "real" visually impaired people.

As well as visually impaired volunteers, biographies of visually impaired people were consulted to gain an appreciation of how visually impaired people could adjust to and live with their sight. Obviously, this only showed the attitudes of those who were prepared to discuss their disability, or had become able to talk about their disability, through events in their lives, but it gave a useful background to any feelings the volunteers expressed and enabled a higher understanding of the issues raised during the research.

To provide a balanced picture, curators of all the institutions involved in the research were contacted. Personal views, or volunteers' views, were not presented to the curators on the initial contact, so opinions regarding access to the museums and exhibitions were not influenced as far as was possible. Contact was made by telephone, letter, email, and personal meeting wherever possible, and identical points were discussed with those who responded as with the volunteers, whether they pertained to general access or a specific exhibition. From these discussions, useful points emerged as to future plans for developments regarding access for people with visual impairments and also some reasoning as to why the status quo in a particular institution might exist.

The sections of interviews used in the final research can be subject to the bias of the interviewer. It is important to maintain the correct balance through the research Neutrality of an interviewer can be difficult to maintain in a semi-formal situation where questions other than those about the topics under discussion can be encouraged by the lack of a rigid structure.[67] In this situation, it was possible to avoid some of the potentials for influencing

[67] A. Fontana and J. H. Frey, Chapter 22 - "Interviewing: The Art of Science", in N. K. Denzin and Y. S. Lincoln, *Handbook of Qualitative Research*, 1994, p.372

answers by remaining conscious of the fact that I did not have a visual impairment myself and taking care to only work from the answers of my volunteers and not to presuppose how they might find situations. This was particularly important in the visits I completed without a volunteer present. On these occasions, I took print-outs of the results of the other visits with me to assist with ensuring I was considering the same issues with the same provisos, as far as possible, as visually impaired people.

During the course of this research it was also important to remember the potential for subjectivity in the answers given by the volunteers, and therefore it is important to assess this when presenting the results. The semi-structured interview style of research does allow for some freedom and the potential to move away from the point onto a particular favourite subject or common personal complaint. Any information which appeared of a very particular nature to one person, rather than one type of visual impairment was not valid for use in this research. Assessing all the interviews together to formulate the fieldwork chapters allowed any such instances to be highlighted and the difficulty of excessive subjectivity avoided. However, the nature of using research from people makes the data subjective to that group to some extent. The results of this fieldwork are related to the information provided by the volunteers, therefore it is possible to extend this to people with visual impairments in general.

Although the groups were small, the numbers of visually impaired people consulted in the course of this research are significant when other factors are considered.[68] It was necessary to cover a range of visual impairments for this research to be valuable. From those who came forward, there was a wide range of visual impairments, sufficient to illustrate the peculiarity of problems visually impaired people have to contend with, and to assess the potential magnitude of the difficulties facing museums in providing for these visitors.

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[68] See Appendix B for further details concerning the particular visual impairments of the volunteers

People with visual impairments as a whole include those who are prepared to talk about the issues such a disability raises, and those who are not. These factors narrowed down the possibility of volunteers and also how much any volunteer might be willing to help. The Dundee Society for Visually Impaired People, for example, had some members with a 'hostile' reaction to the research, adamant that museums and visual arts organisations in general had nothing to offer them. To concentrate on 'seeing' when use of this sense is limited can be very tiring and therefore affected both the length and quantity of visits. Disappointment with a visit where the provisions for visually impaired people have been poor can discourage further visits elsewhere, and this contributed to the resistance from members of the Dundee Society. The number of volunteers elicited from the contacts made in the light of this background is therefore significant. The results made for informed qualitative information and illustrated why a quantitative survey would have been difficult.

The issue of museums and disabled people is not a new one, indeed it is has become a reasonably fertile furrow in the past few years, for discussion and research.[69] The method chosen for this study is experimental. As far as the author is aware, it is the largest survey on this particular subject undertaken in this manner, certainly in Scotland. The method achieved the aim of focusing on the visitors' comments and their opinions concerning what museums should achieve. An introduction to the presentation of the fieldwork is given in chapter 5 and the information gathered is presented in chapters 6 - 12.

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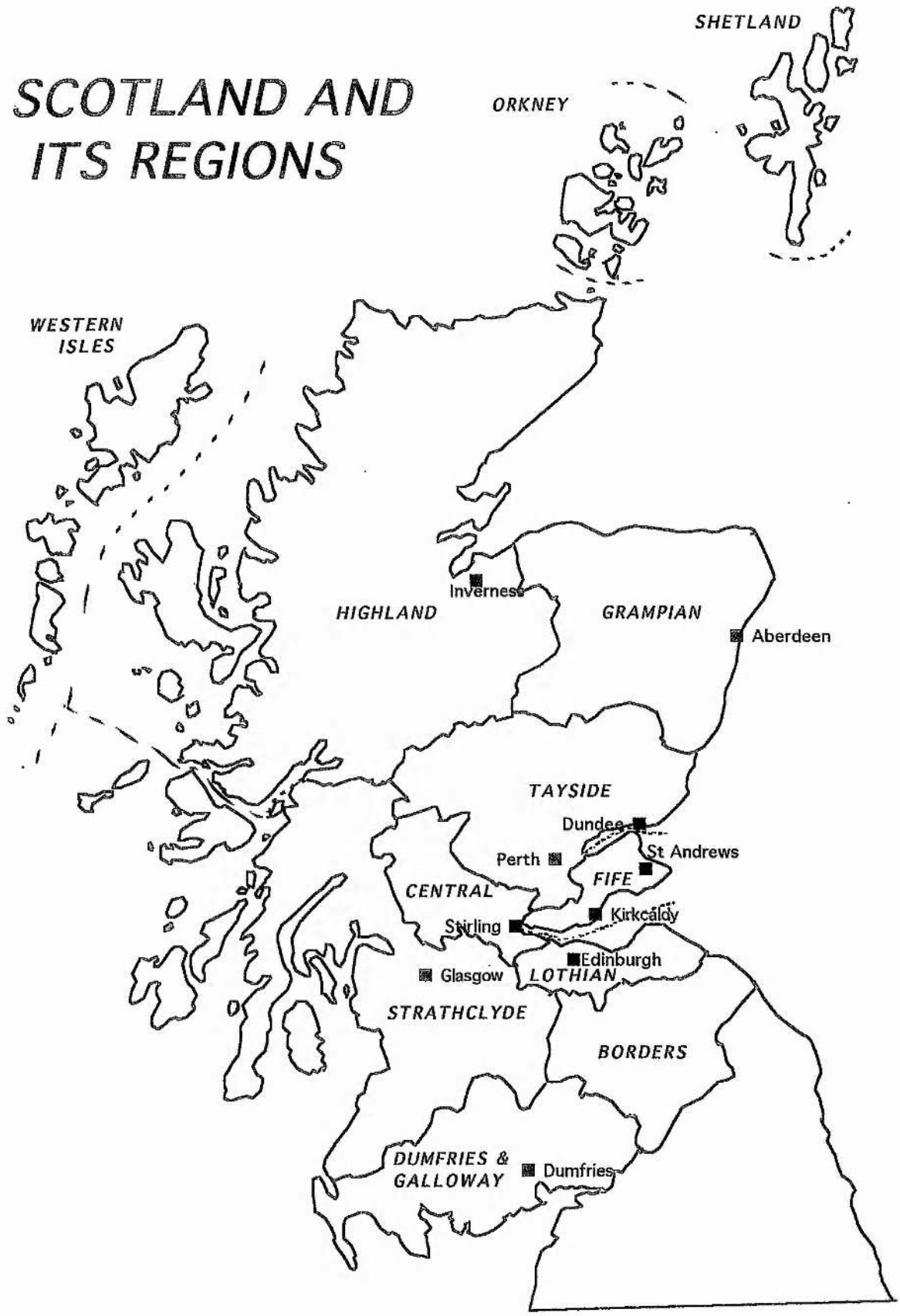
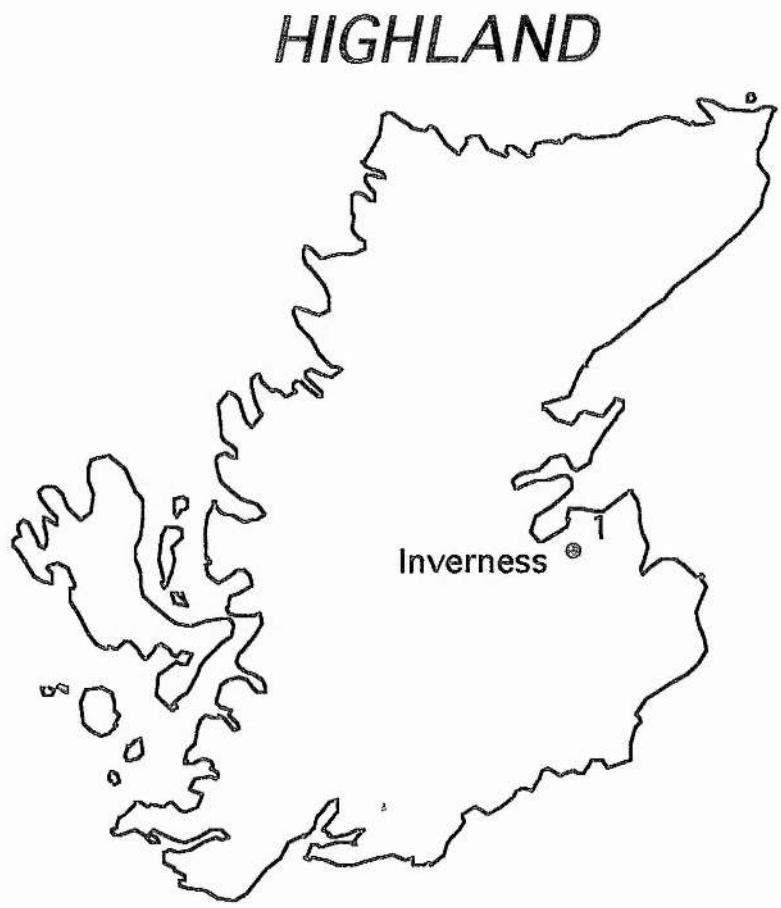
[69] Re:source conducted a survey, in conjunction with market research company Solon, in 2000, entitled "A survey of provision for disabled users of museums, archives and libraries" Currently, there is a project under development at Birkbeck University, assessing, with the help of a selected group of visually impaired people who visit museums regularly, the provision of educational events in museums in the London area.

SCOTLAND AND ITS REGIONS



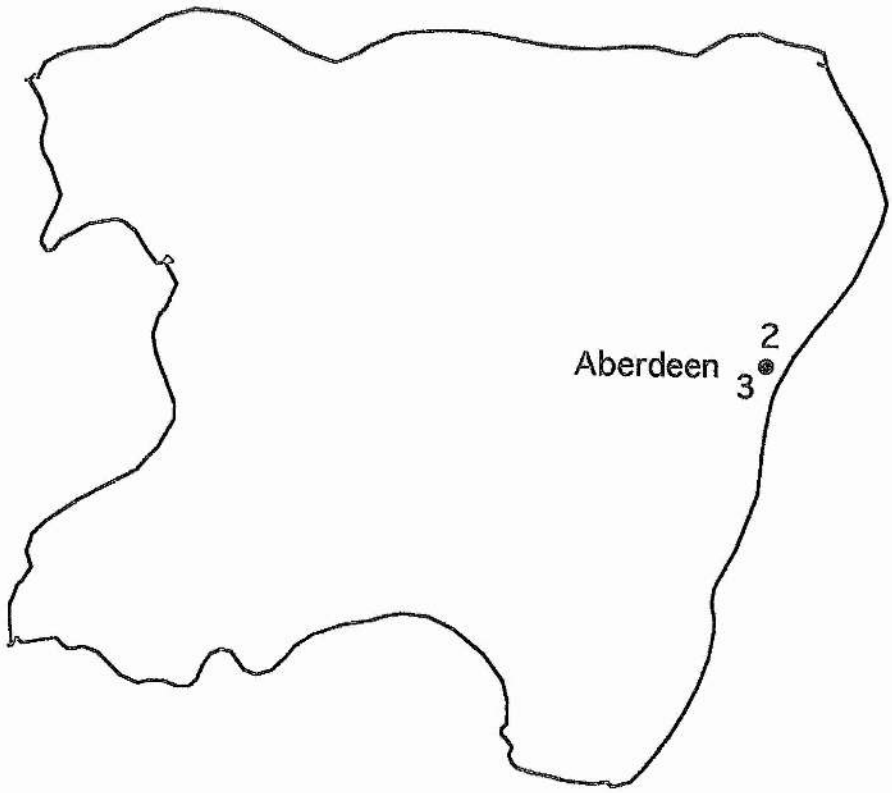


Museums & Galleries Visited in the HIGHLANDS

Reference

1 Inverness Museum and Art Gallery

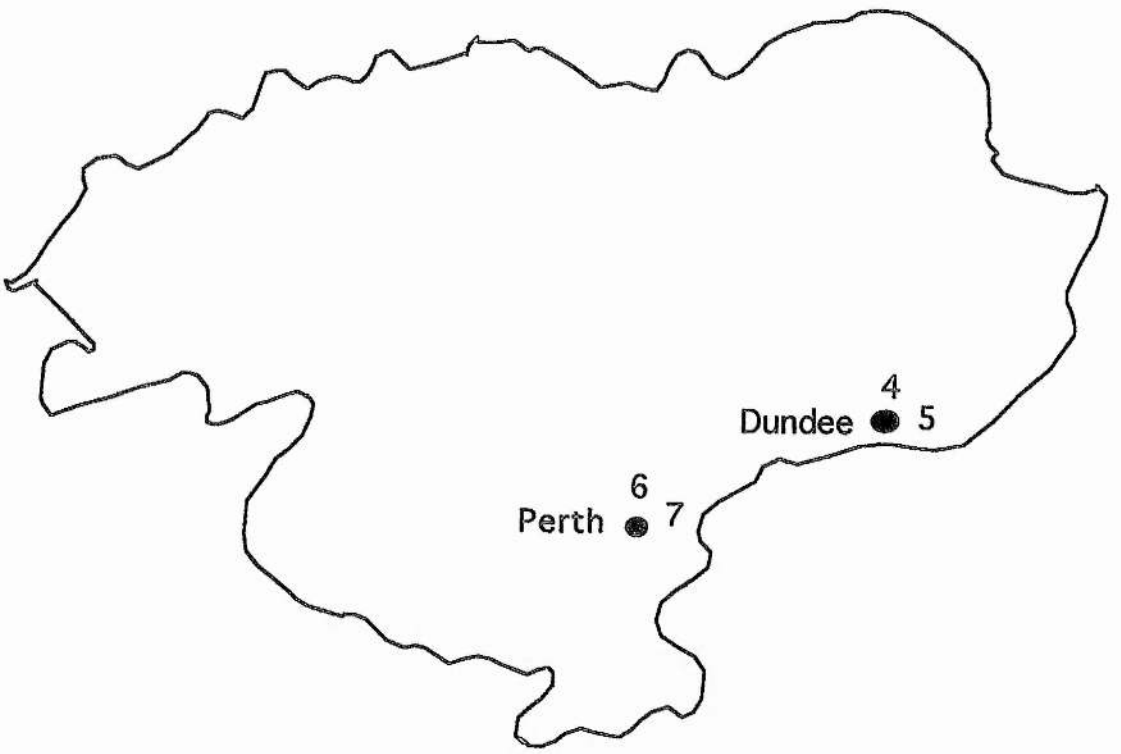
GRAMPIAN



Museums & Galleries Visited in GRAMPIAN

Reference		
2	Aberdeen Art Gallery	Aberdeen
3	Marischal Museum	Aberdeen

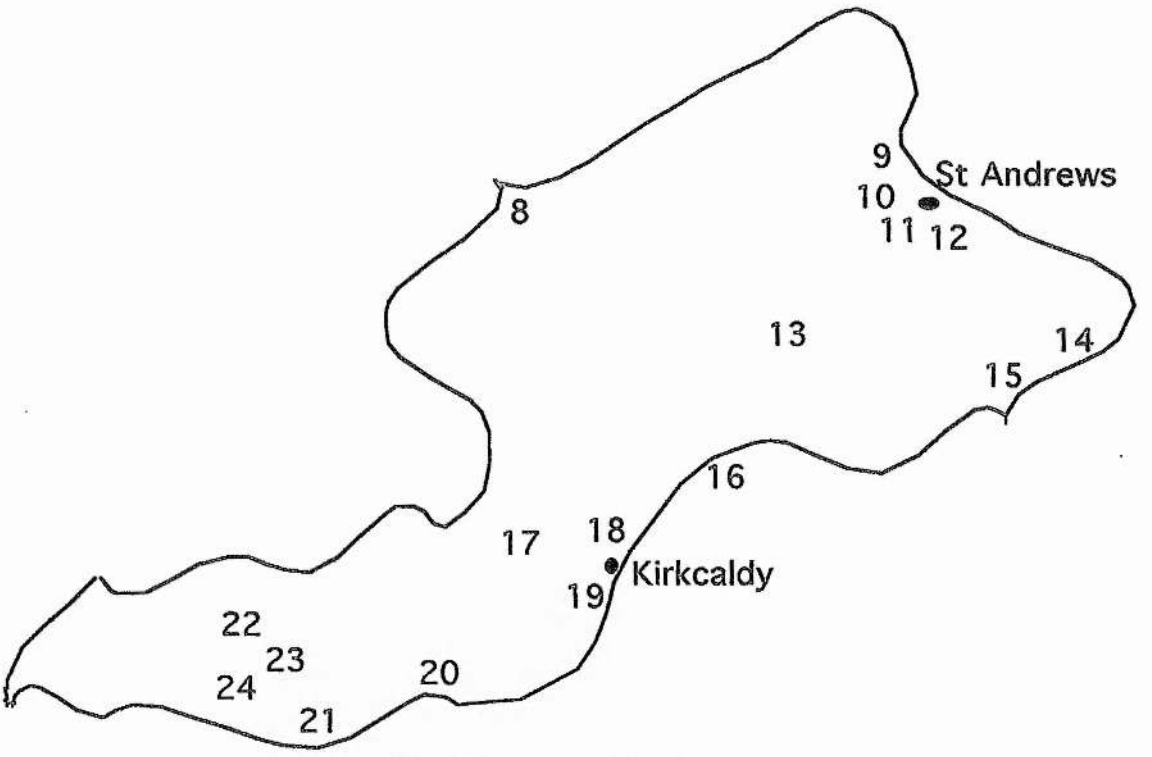
TAYSIDE



Museums & Galleries Visited in TAYSIDE

Reference		
4	Dundee Contempary Arts	Dundee
5	McManus Galleries	Dundee
6	Perth Museum and Art Gallery	Perth
7	J D Fergusson Gallery	Perth

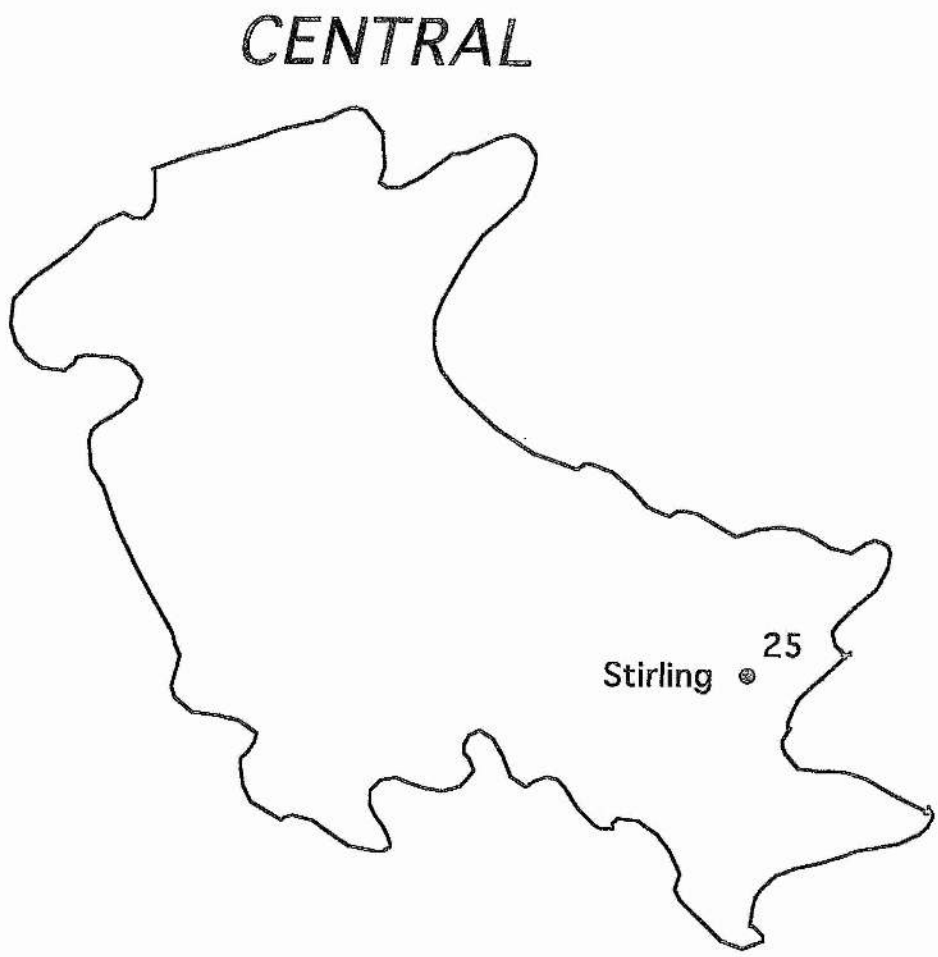
FIFE



Museums & Galleries Visited in FIFE

Reference

8	Laing Museum	Newburgh
9	British Golf Museum	St Andrews
10	Crawford Arts Centre	St Andrews
11	St Andrews Museum	St Andrews
12	St Andrews Preservation Trust Museum	St Andrews
13	Fife Folk Museum	Ceres
14	Crail Museum	Crail
15	Scottish Fisheries Museum	Anstruther
16	Buckhaven Museum	Buckhaven
17	Corridor Gallery	Glenrothes
18	McDouall Stuart Cave	Kirkcaldy
19	Kirkcaldy Museum and Art Gallery	Kirkcaldy
20	Burntisland Museum	Burntisland
21	Inverkeithing Museum	Inverkeithing
22	Dunfermline Museum and Art Gallery	Dunfermline
23	Pittencrieff House Museum	Dunfermline
24	Andrew Carnegie Birthplace Museum	Dunfermline

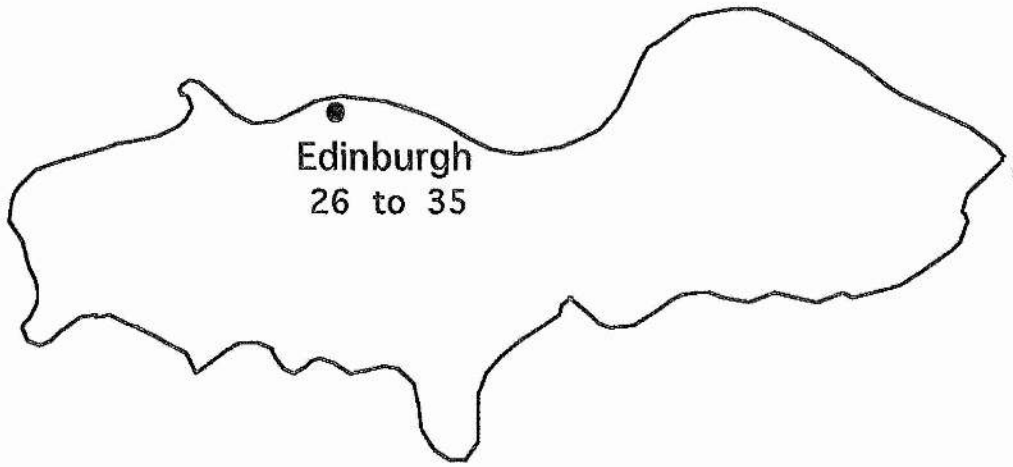


Museums & Galleries Visited in STIRLING

Reference

25 Smith Museum and Art Gallery

LOTHIAN



Museums & Galleries Visited in LOTHIAN

Reference

26	Talbot Rice Art Gallery
27	Royal Museum of Scotland
28	Museum of Scotland
29	Scottish National Gallery
30	Scottish National Portrait Gallery
31	Museum of Childhood
32	Stills Gallery
33	Collective Gallery
34	City Art Centre
35	Writers Museum

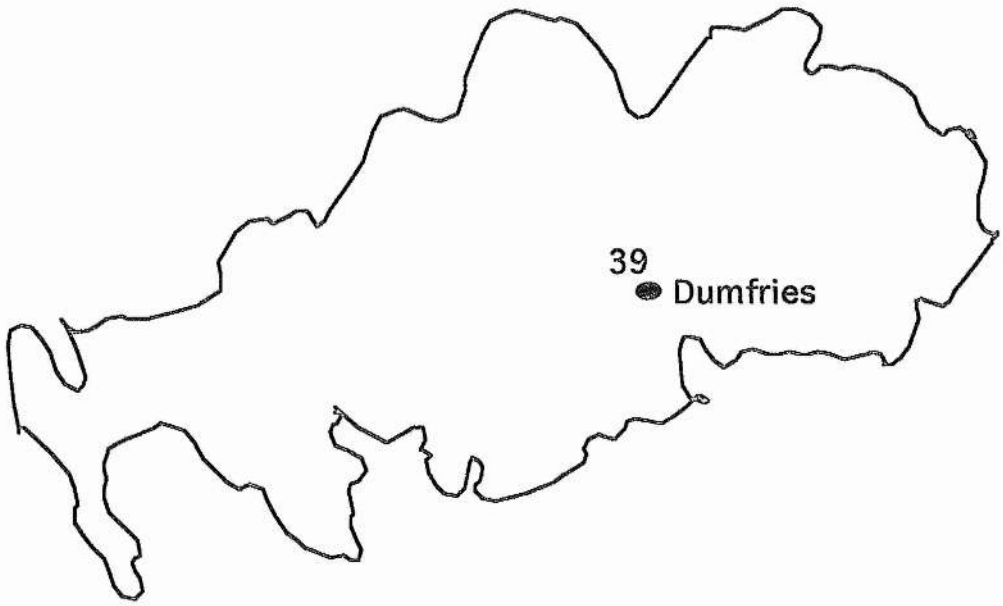
STRATHCLYDE

Museums & Galleries Visited in STRATHCLYDE

Reference

36	Collins Gallery
37	Gallery of Modern Art
38	Kelvingrove Museum

DUMFRIES & GALLOWAY



Museums & Galleries Visited in DUMFRIES

Reference

39 Gracefield Arts Centre

Chapter 2

VISUAL IMPAIRMENT

The percentage of the population who have any degree of sight loss is difficult to quantify. Several different categorical terms have developed for people with various levels of sight, including 'blind', 'partially sighted', 'visually impaired', 'visually disabled', 'visually challenged', 'visually disadvantaged', 'vision impaired', 'sight impaired'. With such a myriad of terminology, a 'correct' definition for any particular level of sight loss is almost impossible to decipher. This affects any attempt to enumerate the percentage of the population who have various degrees of sight loss.

A method for attaining suitable definitions for levels of sight loss has been determined by the RNIB with recourse to medical assessments. The RNIB have formulated two definitions, 'blind' and 'partially sighted', both of which are dependent on levels of vision determined by ophthalmological tests. 'Blind' includes those who have one tenth of 'normal' vision, have eyesight too deficient to continue to do work for which eyesight is essential, or have levels of vision which only allow discernment of hand movements or perception of light and dark.[1] 'Partially sighted' has a more obscure definition but acknowledges that people who might not have sight loss as extreme as to be termed 'blind', but who have only marginally better vision, have difficulties with everyday life.[2]

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[1] These issues are discussed in greater depth later in this chapter.

[2] The RNIB do not make the only attempt to define blindness. The World Health Organisation describes 65 different definitions of blindness, including 'profoundly blind', which is the inability to count fingers at a distance of ten feet or less. 'Severe low vision', as opposed to 'blind', is the inability to count fingers at twenty feet or less.

There are two separate registers for the above different levels of vision and it is from the members of these that the RNIB produce their statistics. The most recent figures available from the RNIB are from 1997.

Figure 1 – UK registered blind and partially sighted population in 1997

Country	Blind	Partially Sighted	Country Totals
England	158,590	138,176	296,766
Wales	8,955	8,458	17,413
Scotland	22,777	11,049	33,826
N. Ireland	3,634	2,514	6,148
UK Total	193,956	160,197	354,153

Scotland, the second largest country in the U.K., has the second highest number of blind and partially sighted people on the RNIB registers. However, the registers do not account for everyone who might be described as 'blind' or 'partially sighted' because not everyone chooses to become a member, for various reasons. Many people are unaware of the existence of the registers, are too young to appreciate its existence, or do not wish to join it as they feel it represents an admittance of a difficulty. Registration, however, can be helpful for people who have severe sight loss as it regulates the financial entitlement which can be claimed and the assistance Local Authorities can be expected to provide. The most recent figures for estimates of population totals and for people with sight loss which would qualify for inclusion on the RNIB registers are from 1996.[3]

[3] These figures were formulated between the 1991 census and the 2001 census. Data from the census taken last year will not be available until the end of 2002 and some information will not be made public until mid-2003

Figure 2 – Estimates of the general population and the registerable population of visually impaired people by region and age in the UK in 1996

Country	Estimates of Total Population	Age 0 - 15	Age 16 - 64	Age 65 - 74	Age 75+	Totals
England	49,089,100	20,110	138,410	104,830	634,020	899,380
Wales	2,921,100	1,200	8,340	6,960	40,640	57,140
Scotland	5,128,000	2,060	14,960	11,100	59,710	87,830
N.Ireland	1,663,300	830	4,430	3,050	16,090	24,400
UK Total	58,801,500	24,200	166,140	125,940	750,460	1,044,740

The total for Scotland under this analysis greatly exceeds that of the numbers who were actually registered one year later, 87,830 as against 33,826. The comparison between the two tables above indicates the increased potential number of visitors to museums with severe degrees of sight loss than is easily measurable.

Within Scotland, the Office of National Statistics, on behalf of RNIB Scotland, provides similar estimates of potential but not necessarily registered people with severe sight loss within four age groups. The most recent figures available are again for 1996. The regions selected from the total which are included below are those in which the museums visited for this research are located, and are all amongst the most populated regions of Scotland.

Figure 3 – Population estimates for mid-1996 of the registerable visually impaired people from the Office of National Statistics

Region	Estimates of Total Population	Age 0 - 15	Age 16 - 64	Age 65 - 74	Age 75+
Aberdeen City	217,260	79	637	444	2,459
Aberdeenshire	227,430	99	636	417	2,328
Dumfries/Galloway	147,600	58	444	389	2,029
Dundee City	150,250	58	449	367	1,912
City of Edinburgh	448,850	155	1,298	951	5,564
Fife	349,300	143	1,002	775	4,241
Glasgow City	616,430	242	1,786	1,341	7,355
Highland	208,700	88	610	464	2,437
Perth & Kinross	132,570	52	391	333	1,907
Totals	2,498,390	974	7,253	5,481	30,232

All the regions follow the same pattern, the smallest number of people being the youngest age group, and the largest being those over 75. This pattern is replicated throughout the United Kingdom[4] and indicates the trend of the aging population. This is a statistic museums need to be aware of in itself, as well as the possibility arising from this trend of an increase to numbers of visitors to museums with visual impairments.[5] The percentage of the population with severe uncorrectable sight loss, both in Scotland and the UK as a whole, is not insignificant and its components are likely to form some percentage of museum visitors. In the spirit of access for all, museums need to be aware of the varying needs of people with severe sight loss and how to make their exhibitions and services as welcoming as possible.

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[4] See Figure 2

[5] The relationship between aging and visual impairments is discussed later in this chapter.

THE EYE

To understand why so many people have various degrees of sight loss, why the severity of the loss is so difficult to quantify, and why there are so many different types of sight loss, it is important to understand the composition of the eye and how it works.

The eye is often described as operating in a similar fashion to a camera. The pupil operates as the aperture which allows light to enter the eye and meet the "lens", an elastic body behind the iris. The light rays are refracted to present a clear image to the "light-sensitive film" at the back of the eye, the retina, to create a picture which is at this stage upside down. The pupil and the lens change shape to alter the amount of light that enters the eye, or as the eye focuses on objects which are particularly close or distant. Both eyes produce images and the optic nerve connects each retina to the brain which enables the image to be processed. The brain turns the image the correct way up, after the refraction of the light ray onto the retina, and fuses the two images from the two eyes together.

The retina is a vital component in translating the light rays which enter the eye into a "picture". The retina is formed from two layers, the thin pigment epithelium and a thicker neural retina, made up of many layers of nerve cells. These cells are called photoreceptors, which respond to light. The photoreceptors themselves are of two different types, rods and cones. When light is focused onto these rods or cones, an electrical charge is generated, the size of which depends on the amount of light present; this charge passes down the optic nerve to the brain. As each of these cells receives a slightly different amount of light and sends a different electrical pulse, the brain is able to assemble a picture.

The rods and cones perform two separate functions within the eye but work together to produce the images eyes see. The cones enable the perception of colour and the rods react to the level of light. They work in combination because colours are more easily discerned in light conditions. There are seven million cones located in the centre of the retina in the fovea and these enable the representation of detail and colour. The cones are particularly sensitive to red, green or blue and, working in combination, allow visibility of different colours.

The rods are particularly sensitive to light intensity but are not able to discern individual colours, only detecting shades of grey. The 127 million rods are located around the fovea and extend right to the edges of the retina. These function when lighting is dim and also provide the peripheral vision outside the main line of sight. The rods work through the action of a chemical known as rhodopsin which is light-sensitive; it prevents too much light getting in to the eye by the 'closing down' some of the rods in bright light. When there is little light, the rods are needed again, and the rhodopsin becomes active once more; if it works efficiently, it is possible to see in fairly dim light. The process of 'closing down' is not instantaneous, eyes adjust quite slowly to a change from light to dark and dazzling will occur at first when bright light is encountered again. As the rods do not "see" colour, this explains why in dim light, colours fade. Definition of vision is also affected by the presence of light; if light is dim the cones function less well and the rods are relied upon for vision. Consequently, the images seen are less distinct, and also appear clearest from the corner of the eye.

There are therefore several components to the eyes, all of which play a necessary and different role in the function of the organ. Any damage to, or distortion of any of these components will cause a difficulty with vision and the permutation of difficulties is vast due to the individual function of each part of the organ. For example, if any of the cones become damaged, distinguishing colours and the clarity of detail decrease; if any of the rods are damaged, vision

in dark areas is decreased. Damage to other areas of the eye will affect the visual field and will cause frustration to achieve a clear path of sight.

POSSIBLE REASONS FOR SIGHT LOSS

The most common sight problems are short-sightedness and long-sightedness. Short-sighted means a difficulty in seeing distant objects clearly and long-sighted has the opposite effect. There are several reasons for the onset of these conditions. The shape of the eyeball itself can affect the level of vision; only a completely round eyeball can create perfect vision as only in this instance will the light enter the eye and refract on the retina at the perfect angle. Many people have eyes that are not naturally spherical in shape; this helps to explain why many people, at one stage or another, will need glasses to assist their vision. The light rays which are needed to form the "pictures" do not meet exactly on the retina if the eye is an irregular shape. In short-sighted people, light rays from all but the nearest objects meet a little in front of the retina and in long-sighted people light rays from nearer objects have not yet met when they hit the retina, both situations causing a blurring of the image. These problems can be corrected with spectacles or contact lenses which are curved to refract the light rays so that they meet correctly on the retina. In the Western world, currently 40% of the population aged between 5 and 20 years need glasses and almost double that need them aged between 40 and 50 years. Almost 100% of the population need glasses by the time they are 65.[6]

There are a variety of causes for severe sight loss, for example deformity of the eye from birth, disease, accident, and trauma as a result of operation. The four major causes of sight loss in the UK are macular degeneration, cataract, glaucoma, and diabetic retinopathy.[7] The sight of one of

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[6] E. Rosen & W. Rosen, *Ophthalmology,* Medico-Legal Practitioners Series 6, London, 1997, p.64. This book is written for lawyers and co-written by a lawyer, so legal restrictions and compliance are of paramount importance.

[7] Ibid., p.64.

the volunteers used in this research was affected by macular degeneration and one other by diabetic retinopathy.[8] The trend towards the aging population increases the prevalence of these causes of sight loss, the average ages of diagnosis being 70, 69, 72, and 61 respectively. Aging has an effect on eye-sight because, as people age, organs begin to, literally, wear out and need to reproduce cells and repair. Within the body, there is a sense of a race between the organs to regenerate themselves. If vital organs cannot reproduce cells quickly enough, the person dies. Therefore, priority is given by the body to looking after the vital organs. The non-vital organs are inevitably under greater pressure and the eye, being an external non-vital organ, is subject to the additional degenerative effects of the environment, particularly strong sun and excessive pollution. Aging also alters the function of the eye; the lens constantly reproduces fibres and, the older the lens, the thicker it becomes and the less able it is to move to focus.[9] This in particular is responsible for the above statistic of almost 100% of people over 65 needing to wear glasses.

Macular degeneration is the most common single cause of poor sight in people over 60 years of age. The macula is situated in the centre of the retina and so only influences the central visual field. It therefore affects activities requiring concentration on detail, including reading and writing, and it also distorts vision of colour. In its early stages, it cause a blurring of central vision and a distortion of the shape of objects, and an over-sensitivity to light or seeing lights which are not there. This blurring of vision may eventually become a "black spot". Almost all people who develop macula degeneration have enough peripheral vision to cope with everyday life and the condition is not painful. As macular degeneration is age-related, it tends to involve both eyes, although not necessarily at the same time.

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[8] See Appendix B. The fact that only some not most of the volunteers' sight was affected by the four major causes of sight loss is probably due to the relatively small number of volunteers who were able to assist with the research, and the desire to find people with a range of visual impairments.

[9] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.69

Glaucoma is another common cause of sight loss, affecting 2 in 100 people over 40. There are several types of glaucoma and the risk increases as age increases, the RNIB quoting figures of 1% in people aged over 40 years, and 5% in people aged over 65 years. People with very short-sight have a higher risk of developing the condition as do people who have diabetes. Glaucoma is caused by the blockage of the drainage channels with aqueous fluid; there is no pain but the field of vision gradually becomes impaired. In chronic glaucoma, the condition is acute and sudden, with an early loss in the field of vision, shaped like an arc slightly above or below the centre of vision. If untreated, the blank area spreads and will eventually remove peripheral vision, leaving only central vision and so creating what is commonly termed tunnel vision. Detailed vision remains but glaucoma particularly affects awareness of surroundings and navigation.

Diabetic retinopathy usually gives rise to retinitis pigmentosa, which can start to occur between the ages of 10 years and 30 years. It affects the pigment epithelium layer of the retina and prevents the correct processing of light rays to the optic nerve. It can affect either rod or cone cells with symptoms covering the functions of both these areas, including difficulty seeing in poor light, and reduction of the visual field from all sides. If rod cells deteriorate first, the effect is to create a small field of central vision, commonly termed 'tunnel vision', similar to glaucoma; if the cone cells deteriorate first, the effect is similar to macular degeneration and peripheral vision remains. Retinitis Pigmentosa is progressive; even if the rod cells begin to deteriorate first, it can progress to the cone cells.

Cataracts, which can form at any age, cause a clouding of the lens of the eye, providing symptoms of blurred and darkened vision, because light rays cannot pass through the clouded lens to the back of the eye. Vision can also become 'double' as the light rays from both eyes which are able to pass through to the retina do not always meet the retina at the same time. The cataract also affects the perception of colour, giving everything a yellowish tinge.

Colour vision is a separate entity and its associated effects are discussed further in chapter 7.

REGISTRATION

How exactly people become registered or not is dependent upon optometrists and ophthalmologists. For them, the definition of blindness varies from country to country throughout the world,[10] and vision is a product of the image formed by the optical system of the eye. Sight is tested by optometrists usually by details of the history of the individual eyes and a physical test. This test is usually performed using the Snellen chart in a consulting room. Many of us will be familiar with such a chart from visits to opticians; it comprises rows of letters arranged in decreasing letter size. The smallest letters on the chart are 8.75mm (0.35in) high. The image they make on the retina, however, is 0.025mm (a thousandth of an inch) high. The size of the letters are set so that each row should be legible at a set distance to a person with 'normal vision', that being the ability of the eye to focus on objects without the aid of corrective lenses.[11] This distance has been determined to be 6m, because this approximates to 'optical infinity', in other words eyes would not need to adjust to view anything within this range.[12] The 10 letters used on the Snellen chart are specially formed and there is a minimum of 5 letters on a line, and each line next to the other varies in size by 25%, larger or smaller. The black letters on white present a strong contrast. It is not just the ability to discern detail which is tested here, but also the breadth of the visual field. Each eye is covered in turn and the patient stares straight ahead and a small white object is

[10] E. Rosen & W. Rosen, *Ophthalmology,* 1997, p.61
[11] Ibid., p.173
[12] Ibid., p.43.

moved from behind the head round the side until it is seen.[13] Visual field should be 120 degrees from side to side and 65% up and down. Should the visual field in either direction fall below 20% of these prescribed levels, the person can be classified "blind" regardless of the Snellen rating and their ability to see detail. Such tests produce the assessments of our ability to see, which is noted on the prescriptions opticians produce.

The Snellen test results are noted as, for example, 6/12. The first number refers to the distance the person stands from the chart, in this case 6m, and the second number refers to the line on the chart legible at that distance. The bottom line is called line 6, the one above that, line 9, then line 12, then 18 and so on. The numbers represent the distance from the chart a normal eye is expected to see the letters unaided. In the above example, the letters on the 12 line are legible from 6m so the ability to see is recorded at 6/12, this eye can read at 12m what a normal eye can read at 6m. If a patient can read the bottom line, called the 6 line, the vision is classed as "normal" and 6/6.[14]

Some people may not be able to see the largest letter on the Snellen chart, so their vision will be worse than 6/60, 10% of considered normal vision.[15] Then, a patient can move closer to the chart in one metre increments until he/she can read the largest letter. The recording may be as 1/60, 2/60 - at a distance of 1m the largest line can be read, or at 2m. Therefore if the patient is as close as one metre before the largest letter can be read, then the vision is recorded as 1/60, 10% of normal vision, and thus 2/60 is 20% of normal vision. If the largest line is still illegible then fingers are held up to be counted. When they can be distinguished the distance is recorded thus, for example, "CF at 1m". If even that is illegible, visibility of hand movements are assessed and

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[13] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.43 - Illiterate patients or children are given letters to hold in the appropriate direction when they see one on the chart; pictures of well-known items, dog, cat, cow, horse, bicycle, car, of decreasing size are also used if letters are inappropriate.

[14] Ibid., p.43. Many people are able to read even smaller letters at 6m, and notation of 6/5 or even 6/4 can be recorded.

[15] Ibid., p.44

such vision is noted as "HM". The lowest level of perception is noted as 'just perception of light' (PL); this can be further detailed by moving the light up, down and to the side.

The classification of "blind" is not based solely on the results of a Snellen test. In the UK, a person can be certified "blind" if his/her visual performance is so bad that he/she is unable to do work for which sight is required.[16] The BD8 form (1990) which ophthalmologists must complete provides a legal definition from the National Assistance Act 1948 - "so blind that they cannot do any work for which eyesight is essential."[17] There is also the additional clause that "Whether to certify a person as blind or partially sighted requires the use of your own judgment".[18] Ophthalmologists can only judge on a person's eyesight regarding their ability to do a job, and they must judge based on any job, not just the one the person may be performing at the moment.[19] Ophthalmologists are given some help on this form, with three groups who should be certified blind - 3/60 Snellen and below; 3/60 to 6/60 Snellen if their visual field is poor; 6/60 Snellen and above if the visual field is poor. However, certain defects can be excused provided the visual field is clear, even if their Snellen rating is low. Age is also a consideration; older people who fulfil one of the categories may be more readily classified as they will find adapting difficult, and recent failure of eyesight is also a consideration. In the USA, legal blindness is a corrected ability to distinguish detail of 20/200 or less: it is 6/60 in the UK providing a similar percentage of 10%.

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[16] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.61

[17] Ibid., p.61

[18] Ibid., p.61. Ophthalmologists and Optometrists who judge eye-sight are registered by the Opticians Act 1958

[19] Ibid., 63. These definitions are very important for career choice; HGV and any form of driving, police service, fire service, the armed services, civil aviation, require a certain level of sight. Driving tests begin with the number plate test to check the driver has a sufficient level of sight. Vision here must be 6/10 and a visual field of 120 degrees above and below the centre of vision.

The Register for people with "partial sight" is formed in a way similar to that described above. Deformity of the eye from birth, disease, accident, and trauma as a result of operation are as relevant here, even if the results are less extreme than above. Form BD8 (1990) offers no legal definition for partial sight but the general guidelines say that a person can be said to be partially sighted if they are "substantially and permanently handicapped by defective vision caused by congenital defect or illness or injury."[20] Again, there are guidelines for classifying 'partial sight', including people with Snellen results of between 3/60 and 6/60 but with a full visual field and people with a Snellen reading of 6/24 or even better if they have a very poor visual field.

Those who have readings starting with a 6m distance can usually live everyday life with the assistance of prescription glasses or contact lenses. However the results of the Snellen test do not always translate accurately into everyday life due to the nature of the conditions in which the test is performed. The tests usually take place in rooms with a good level of lighting and with a brightly lit chart and excellent contrast between the black letters and the white background. The test is not designed as an accurate control because the variation in the number of the letters on each line, and the sometimes uneven spacing, affect people with different visual difficulties in different ways. This suggests that there may be an even larger group who need special visual consideration, and it should be remembered that there are many people who do not consult opticians at all so the group may be yet larger still than any statistics indicate.

To be legally classified as 'blind', therefore, does not mean that nothing at all can be seen. Museums and similar institutions can still attract people with severe sight difficulties as visitors. Therefore it could be expected that although there is a specific recognisable body of people registered as

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[20] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.63

'Blind' or 'Partially Sighted', there is also a more substantial number of people who are 'visually impaired' whether diagnosed as such or not. This body of people, along with those who are registered 'blind' or 'partially sighted' are the very audience whom the museum managers may be neglecting through incomprehension of their difficulties. If museums address these difficulties then blind and visually impaired people who have the desire and interest to visit may have an enjoyable and rewarding experience and naturally the increased audience can recount their experience to a wider section of society who may also become regular visitors.

TERMINOLOGY

> It is perhaps impossible to invent a terminology which does not either patronise or insult.[21]

'Blind', 'visually impaired', 'visually disabled', 'visually challenged', 'visually disadvantaged', 'vision impaired', 'sight impaired', are all used to describe people with degrees of sight loss. Political correctness and misconceptions of what 'blind' actually means play their part in the adoption of these terms. As with any disability, perception of terminology used to describe them is emotive and, because of the subjectivity of personal choice in how one presents oneself, no consensus can be reached in terminology, but a middle ground should be sought.[22] 'The disabled' is also used as a descriptive term, but is sometimes considered generic and impersonal, with a preference for 'disabled people' or 'people with disabilities'. Alternatives offered are to refer to everyone as 'temporarily able-bodied', or to refer to people who do not have a disability as 'the able-bodied'. This will probably not be the adopted practice but it is perhaps pertinent to remember that anyone can become 'un-able-bodied' at anytime, even if 'temporarily' by means of a broken leg for

[21] R. Garland, *The Eye of the Beholder*, 1995, p.5
[22] R. McGinnis, Chapter 28, "The disabling society", in E. Hooper-Greenhill (ed.), *The Educational Role of the Museum*, 1999, p.281

example, so provisions for those less mobile than others is relevant to all of us, be this lack of ease of mobility because of visual impairment or other situation.

Societal perception of people with disabilities and visual impairments has had an effect on people with visual impairments themselves. The RNIB journal, *New Beacon*, between 1980 and 1999, recorded a variety of comments by people with visual impairments on the usage of terminology and their perception by society. The age of political correctness has tried to refine the usage of terms such as 'handicapped' in relation to people with disabilities. 'Handicapped' is seen as a negative term, in the same way as the use of generic terms, as seen above, and irritates even those people with visual impairments who are not obsessed with political correctness; it lowers the perception of their abilities. Visual impairment is not a 'handicap' to their everyday life, it is something that has to be lived with.[23] 'Handicapped' is also refuted due to its literal meaning of a person holding a cap out in his outstretched hand for alms; such an image of 'helplessness' is not desired by people with sight impairments.[24]

"Blind" is defined as "destitute of the sense of sight"[25] and is also used as a generic term in contemporary conversation, such as 'the blind' or 'a blind man' when discussing people with sight loss.[26] It is misleading to refer to all people who have difficulties with vision as 'blind', however the Royal National Institute for *the Blind* has never been criticised, despite the fact that it includes members who are not 'blind' by its own definition. To be classified as 'blind' requires inclusion on the RNIB register with a specified level of minimum sight.[27]

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[23] Letters to the Editor, *The Guardian*, 3rd February 1999, p.22

[24] R. Wilson-Hinds, "Blind identity", *New Beacon*, vol.76, no.900, July/August 1992, London, 1992, p.283-284

[25] J. A. Simpson and E. S. C. Weiner (ed.), *Oxford English Dictionary*, 2nd ed, Vol. II, BBC - Chalypsography, p.285, I (literal) destitute of the sense of sight, whether by natural defect or by deprivation. (All other definitions imply hidden, no light, darkness, unless 'term' specific)

[26] Ibid., p.285 - d) (absol) A blind person, especially as pl. Those who are blind, as a section of community.

[27] RNIB Intranet information, provided by Alison McCall, RNIB Employment and Student Support Network Scotland, taken from website - www.rnib.org

The RNIB also has a register for "partially sighted" people, those with severely limited vision, but less limited vision than those who are termed "blind". The use of the word "sighted" indicates that there is some level of vision.[28]

The RNIB also uses the term "visually impaired" in its literature and this term has gained popularity amongst people with sight loss who do not qualify for inclusion on the above registers. Some people who might qualify for inclusion on the registers prefer not to become members, either because they do not realise that they can or they prefer not to admit to sight difficulty. The RNIB operates for all people with difficulties with vision and as such chooses to use the term "visually impaired" or "visual impairment". People do not have to be on one of the RNIB registers to fall within the definition of disability specified by the DDA, so this wider group is part of the potential audience of museums who will expect change to be brought about for them by the legislation. The exact size of this group is impossible to quantify, but will include a range of people with difficulties with sight for a variety of reasons.

Despite the common usage of 'visually-impaired' by the RNIB, there are those who object to this terminology and say the correct description is 'vision-impaired' because 'visually-impaired' could be said to mean 'of unpleasant look'. 'Vision' is the 'action of seeing with the bodily eye; the exercise of the ordinary faculty of sight.'[29] and 'visual', 'pertaining or relating to, concerned or connected with sight or vision.'[30] Perhaps then, there is a case for

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[28] J. A. Simpson and E. S. C. Weiner (ed.), *Oxford English Dictionary*, 2nd ed, Vol. XV, Ser - Soosy, p.446 "sighted" means 'having sight of a specific kind' *Oxford English Dictionary*, 2nd ed, Vol. XV, p.443; p.444 III 8a) The faculty or power of seeing, as naturally inherent in the eye; eyesight.; p.445 IIa) The exercise of the faculty of vision; the act of seeing or looking, especially by sight, frequently denoting merely visual, as contrasted with more intimate knowledge. from 'sight' meaning 'the perception or apprehension of something by means of the eyes; the presentation of a thing to the sense of vision.'

[29] J. A. Simpson and E. S. C. Weiner (ed.), *Oxford English Dictionary*, 2nd ed, Vol. XIX, Unemancipated - Wau-Wau, p.688

[30] Ibid., p.699

this change. 'Visually impaired' is an all-inclusive term, meaning anyone who has no vision to those who have useful vision. 'Impairment' means a lack of, or abnormality.

Some people who have difficulties with sight take the view that if they cannot see as well as someone who does not need excessive correction to their vision, they are 'blind', not 'partially sighted', not 'visually impaired' or anything else. This topic also created debate in the *New Beacon* letters pages.[31] Only one of the fieldwork volunteers was of this opinion and, although it is a minority view, nevertheless, it needs to be considered when preparing literature in connection with people with sight impairments.

There is also the issue of terminology when addressing people with a visual impairment. The RNIB offers recommendations on this, advising, above all, to talk naturally to people with visual impairments. It is essential to always introduce oneself on arrival and tell them when one is leaving, and always address the person themselves and not the person who may be accompanying them. The use of words such as "see" and "look" can be felt problematic but the RNIB encourage their usage "naturally", as visually impaired people use them too.[32]

The RNIB encourages a positive attitude to people with visual impairments, preferring terminology which emphasises the fact that they are 'people' and discouraging the use of generic, impersonal terms, for example, 'the blind', 'the visually impaired'.[33]

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[31] Letters to the Editor, *New Beacon*, vol.76, no.903, November 1992, p.420
[32] RNIB, *Making Museums Accessible*, London, 1995, p.4
[33] Ibid., p.5 The title "Royal National Institute for **the Blind**" has not received wide criticism, however.

The title of this thesis and the descriptions of the volunteers use the terms 'visually impaired', or 'visual impairments'. This terminology was selected after consultation with the volunteers and reading the literature appropriate to this research. [34]

[34] The issue of capitalisation of 'Blind' or 'blind' is also a matter of discussion, and similarly 'Braille' and 'braille'. One of the volunteers, in discussion outside his interview for this research, suggested, by way of reasoning for his preferred choice of a small "b", that Deaf people are entitled to a capital letter as they are seen to be their own community, using a language which is specific to them, Sign Language, which has to be learned like a foreign language. Blind people can still communicate in spoken English, therefore are not perceived as a community in their own right. This idea was related by one of the volunteers and was checked with the British Deaf Association who stated that they advocated the use of a "D" for Deaf but other organisations differed from them, so either a "D" or "d" could be used.

Chapter 3

LEGISLATION AND RESPONSES

The support, and indeed the necessity, for museums to adapt to changing audiences has been motivated in part by legislative developments which museums have to observe. Governmental policy discussion, particularly concerning minority groups, is focused on "social inclusion", the need to consider all facets of society when planning change and development. The DDA aims to ensure that 'social inclusion' is addressed for people with disabilities.

The Department for Culture, Media and Sport (DCMS), in its present incarnation, has prepared advisory documents to assist museums with the legislation formed by the British government. Museum support organisations have also created advisory documents concerning how museums could welcome people with disabilities and other under-represented people into their institutions. The MA and Re:source (taking over the duties of the Museums and Galleries Commission (MGC)) and the SMC in Scotland have provided guidelines which museums are encouraged to follow.

In Scotland, the advent of the new Scottish Parliament in 1999 heralded the potential of change for the people of Scotland now that power was closer to home. The Parliament is headed by the Scottish Executive, the equivalent to the Cabinet of the UK Government. However, devolution only encompassed some powers, with the government at Westminster retaining foreign and defence policy, macroeconomic policy, transport and safety regulation, social security payments, matters where it would be disadvantageous to have a different regime across the border, and

employment and equal opportunities.[1] Therefore, legislation regarding the rights of disabled people is not devolved, so the Scottish Parliament cannot create legislation which replaces the DDA. The powers which are devolved are those previously held by the Secretary of State for Scotland, a post which still exists within the British Government, and include most areas of public policy, health, education and training, civil and criminal law. Most importantly for museums, culture and arts are among those powers devolved. Scottish museums can develop independently to some extent of museums in other parts of the United Kingdom.

The Scottish Parliament does have considerable powers to promote equality of opportunity.[2] It operates a committee structure of eight committees which mirror ministerial portfolios and eight statutory committees. Of the latter, one is concerned with equal opportunities. Each committee has one or two members who are elected to resource information to report back to the committees. They have the opportunity to summon witnesses, thereby enabling the public to have a voice. In the case of the Equal Opportunities Committee, there is a Disability Reporters Group which discusses disability issues and takes representations from people with disabilities. The committee meetings are usually held in public, published, broadcast on television or posted on websites. It is possible to contact all MSPs by email and there is a visitors' centre where information about the Parliament is available. This information is provided in the Gaelic language as well as in English. The committees can require Ministers to attend meetings and there are also regular sessions of oral and written questions. Legislation can be initiated at these

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[1] K. Aitken, *Understanding Scotland's Parliament, A practical guide for the cultural sector*, The Scottish Arts Council, Edinburgh, 1999, p.13. There is obviously the possibility for tension between the parliaments and the stipulation of devolved and reserved powers. There is also the point that the British Constitution vests ultimate sovereignty in the Crown in Parliament. Therefore, theoretically, Westminster could unilaterally take back powers devolved to Edinburgh, but it would be difficult to take back powers against the will of the Scottish people.

[2] The Scottish Executive has also developed an Equality Unit and produces an annual Social Inclusion Report

meetings and this can be brought before Parliament.[3] Further measures are being formulated, including the development of citizens' juries, citizens' research panels and a network of Social Inclusion Partnerships, and the use of existing networks and sources of expertise such as the Scottish Disability Forum.

An anthology of proposals for a new Scottish Parliament, *Without Day*, gathers together fictional proposals for events, works of art, rituals, laws and artistic, cultural, social or political interventions which people from various walks of life have formulated. This publication includes a quote concerning the Scottish Parliament and visual impairment.

> A Proposal for a New Scottish Parliament. In the new Scottish Parliament building I would love to see something for the visually impaired. Around the building, I would like to see large Braille texts, set as long lines, above handrail height, with verses of Scottish poetry, both the well known and contemporary. For the sighted there would be a small text next to it, but it would be firstly for those who read Braille. I would like to see these placed around the building, in foyer spaces and in lengthy corridors.[4]

Disability issues are seen by ordinary members of the public as something which the new Parliament should recognise as important for consideration. Although there are mixed views as to the success of the Scottish Parliament so far, the new Government has several structures in place which could help people with disabilities to make their voice heard.

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[3] The Scottish Executive can counter any proposals by producing its own ideas to go before Parliament

[4] A. Finlay (ed.), *Without Day - proposals for a new Scottish Parliament*, Edinburgh, 2000, p.108

NATIONAL CULTURAL STRATEGY OF SCOTLAND 2000

The Scottish Executive has initiated a National Cultural Strategy, entitled *National Cultural Strategy of Scotland 2000, "Creating our Future: Minding our Past"* (NCS) to make a contribution to the development of culture. It includes recommendations apposite to people with disabilities. The Foreword by Rhona Brankin MSP, Deputy Minister for Culture and Sport at the time of the inception of the NCS, stated that the approach to culture is inclusive. The NCS lists among its eight key development opportunities that education programmes in national museums, galleries and other organisations should be increased and Information and Communication Technology (ICT) used to enhance and widen cultural participation and access.[5] It also makes reference to the finances which it is prepared to provide for museums and galleries through the SMC and the Scottish Arts Council (SAC).[6] There are nine principles in addition to the eight key development objectives and one of these relates to accessibility:

> Disability should be no barrier to cultural access...National and local cultural organisations need to work in partnership with the community from which their audience is drawn.[7]

These principles aim to ensure that everyone can contribute to and enjoy Scottish culture with fairness, tolerance, equality and social justice. All real and perceived barriers to access must be overcome. Indeed this is one of the four Strategic Objectives, to promote inclusion and to enhance people's quality of life. Access to museums and galleries should be progressively improved and reports should be produced into the reduction of cultural exclusion due to various factors including disability. The Scottish Executive

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[5] The Scottish Executive, *Creating Our Future: Minding Our Past*, National Cultural Strategy Of Scotland 2000, Edinburgh, 2000, p.3
[6] ibid., p.6
[7] ibid., p.7

pledges to work with museums and galleries to remove barriers to access and create new opportunities for access using technology, an example of which being the Scottish Cultural Resources Access Network (SCRAN). This is an initiative to make digital images of objects within museum collections accessible over the internet so that a wider audience, including those who might not be able to visit a museum building, can appreciate them. There is also the proposal to convene a national framework of advisors concerning conservation and curatorial support for museums in disparate areas where meeting other curators and exchanging advice can be difficult. Loans and outreach work should be increased. Social Inclusion Partnerships will work with museums to increase activity in the community itself.

The Scottish Parliament has been supportive of museums since its inception. Since 1999-2000, the Scottish Executive has provided additional 'ring-fenced' funding of £225,000 a year to the NMS and the National Galleries of Scotland to enable them to develop and improve public access to their collections. A further £50,000 a year has been made available to the SMC to develop an access strategy to advise and inform its members. The money has also been used to promote the DDA Part III through training courses and workshops by INTACT.

Museums are among the places to participate in Scottish culture and curators form part of the wide range of people who have key roles in presenting and representing culture. As such, there are responsibilities, as outlined in chapter 1 of this thesis, to address societal issues where the cultural sector could be seen to have a part to play. The inclusion of people with disabilities in a society from which they have long felt excluded is one such instance where museums can take their place in working to improve the situation provided methods and motives are considered carefully.[8]

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[8] Further discussion of theoretical literature to illustrate the concept of social exclusion discussed in chapter 1

Social inclusion, or social exclusion consistently prove very difficult terms to define despite the prevalence of their usage in government documents. There is a curious mix in the documents discussed below of social justice, social exclusion and social inclusion, but it is the latter which has most prominence. It implies 'an anxiety about social fragmentation' but also an emphasis on gathering people together. Despite the preference for social inclusion, the UK Government has a Social Exclusion Unit, established by New Labour in August 1997, so there is a direct concern to look at those who are not included. The definition provided by the government of social exclusion revolves around issues of unemployment, low income areas and poor health. This suggests a focus on welfare and perhaps not on inclusion in services.

The Commission for Social Justice, established by the late Labour leader, John Smith, which recommended the establishment of a Scottish Parliament, suggested, in the Commission's social welfare investigations, that there was an understanding of social inclusion within the Scottish Parliament. Scotland developed the Scottish Social Inclusion Network to enable bodies to work together to achieve what is now termed as social justice. The late Donald Dewar in *Social Justice...a Scotland where Everyone Matters*, produced in 1999, stated that

> ...Scotland is on the threshold of a new future. A future where everyone matters, where together we can build on the commitment to social justice which lies at the heart of political and civic life in Scotland.[9]

People with disabilities are just one group covered by "social inclusion" and to bring all minority groups into equality will prove a lengthy and perhaps impossible task. It is not solely the responsibility of museums to further social inclusion and they should not allow themselves to become "government pawns."[10] However, increasing audiences and attracting different

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[9] As cited in SMC, *Museums and Social Justice*, Edinburgh, 2000, Introduction, p.1
[10] J. Appleton, "Museums for The People?", 8th November 2001; taken from website - www.spiked-online.co.uk/Articles/00000002D2BA.htm

groups to a museum has to be a priority both for the preservation of the museum as an institution and with the increasing demands of the potential audience.

Social justice is also used as a term by the SMC in its document, *Museums and Social Justice*. The term is used for the report produced by the shared UK Government and Scottish Executive objective of increasing social inclusion, the *Annual Social Justice Scotland Report*. Such terminology can be seen as an indication that an individual has the ability to participate fully in and have access to his or her cultural heritage as a matter of basic human right.

THE HISTORY OF THE DDA

The approach of the Government to social inclusion is to provide legislation. The DDA was hailed as the Act to provide justice for disabled people. Despite this not being the first disability legislation in the United Kingdom, the passage of the DDA through Parliament was not easy.

The Disabled Persons (Employment) Act 1944 was the first Act which applied to people with disabilities.

> An Act to make further and better provision for enabling persons handicapped by disablement to secure employment, or work on their own account, and for purposes connected therewith.

This was enacted during World War II, and shows an appreciation of the increased possibility of disabled persons entering the workforce after the War, from the services and also civilians injured during attacks, and the training provisions which would be necessary to facilitate this. The definition of "disability" was therefore very much based around issues of employment:

> ...a person who, on account of injury, disease, or congenital deformity, is substantially handicapped in obtaining or keeping employment, or in undertaking work on his own account, of a kind which apart from that injury, disease or deformity would be united to his age, experience and qualifications; and the expression "disablement", in relation to any person, shall be construed accordingly.[11]

The 1958 Disabled Persons (Employment) Act, briefly updated the 1944 Act in relation to

> ...disabled persons, as regards the minimum age for attendance at certain courses under the Disabled Persons (Employment) Act 1944, as regards registration under that Act and as regards the provision by local authorities of employment or other work under special conditions.

There was just a small change regarding the age at which the 1944 legislation, retained as the 'principal Act'[12], came into existence.

The last parliamentary disability legislation prior to the DDA was the Chronically Sick and Disabled Persons Act 1970:

> An Act to make further provision with respect to the welfare of chronically sick and disabled persons; and for connected purposes.

Part II, Section 4, subsection (2) states:

> any person undertaking the provision of any building or premises to which the public are to be admitted, whether on payment or otherwise, shall, in the means of access both to and within the building or premises, and in the parking facilities and sanitary conveniences to be available (if any), make provision, in so far as it is in the circumstances both practicable and reasonable, for the needs of members of the public visiting the building or premises who are disabled.

[11] The Disabled Persons (Employment) Act 1944, Section 1, subsection 1 "Disease" here is to be understood as including a physical or mental condition arising from the imperfect development of any organ Section 1, subsection 2

[12] The Disabled Persons (Employment) Act 1944, Section 4, subsection 2

Schools and universities were excluded[13] but other public buildings now had their first legislative commitment to making buildings accessible to people with disabilities: it did not provide any qualification of what was "practicable and reasonable". In the DDA, the provisions listed above encompass two Parts of the Act, III and V; this development of these issues shows the development of the need for provisions for people with disabilities and the growing power of their voice and recognition in society.[14]

This 1970 Act therefore was the precursor to the DDA of twenty-five years later. That it took this length of time before disability legislation was improved was perhaps a consequence of the priority of other legislation and greater numbers of people asserting the need for other forms of legislation against discrimination. The Sex Discrimination Act (SDA) and The Race Relations Act (RRA) were passed in 1975 and 1976 respectively. Undoubtedly, the SDA and the RRA, which would have affected museum employment rather than visitor access, had an effect on motivating the other minority group, disabled people, to increase pressure for their own legislation, but there were other external influences which helped to encourage the DDA.

THE EUROPEAN CONVENTION ON HUMAN RIGHTS

The development of the European Convention on Human Rights engendered a feeling that not enough was being done in the UK for people with disabilities and the triumphant arrival of the Americans with Disabilities Act of 1990 in the United States motivated disabled people in the UK to adopt direct campaigning for legislation, culminating in a protest at Downing Street itself.[15] Whilst it is not necessary here to discuss the American Act in detail, it is

[13] The Chronically Sick and Disabled Persons Act 1970, Section 21, subsection 2
[14] Ibid., Section 6, subsection 1, regarding improving the Public Health and Safety Act 1936, and Section 11 (4) of Building (Scotland) Act 1959. Section 3 here makes provision for disabled people
[15] T. Jones, "Downing Street protest ends in arrests", *The Times*, 23rd December 1997, front page

significant that it was championed as a role model by people with disabilities within the UK, due in part to the speed with which it was introduced and the number of things it encompassed. The aim of the American Act is to establish a complete prohibition of discrimination on the grounds of disability. The American Act, on initial reading, appears to focus mainly on issues of employment and transportation, but there is a section, as in the DDA, relating to Goods and Services: *Title III - Public Accommodations and Services.* Museums are particularised, along with many other institutions, as qualifying as a "public accommodation" under the terms of the American Act and are expected to comply with the terms of the legislation within two and a half years.[16] This includes alterations to buildings as well as provisions of auxiliary aids to assist with the interpretation of exhibitions. This is a somewhat different timescale to that presented to the disabled people of the UK and is perhaps one of the reasons for the level of dissatisfaction with the implementation and content of the DDA.

The difficulties in bringing disability legislation to the statute book is that it encompasses issues relevant to several departments, for example, Health, Education, Transport. As a general rule, the government does not move to introduce such legislation, but MPs can bring Private Member's Bills to attempt to get such legislation through to becoming an Act of Parliament. The passage of such Bills through Parliament is never easy, hence the chequered journey of what was eventually to initiate the DDA.[17]

The DDA took more than three years to pass through Parliament, beginning on December 4th 1991 as the Civil Rights (Disabled Persons) Bill, launched by Mr Alf Morris, Britain's first Minister for the Disabled, in the last Labour Government, 1974-79. He felt that legislation was needed to prevent

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[16] Americans with Disabilities Act 1990, Title III, Section 7, subsection (H)

[17] S. Goldsmith, *Designing for the Disabled: The New Paradigm*, 1997, p.32

discriminatory treatment.[18] Alf Morris' motivation for the Bill was, as he stated:

> It's an affront to civilised values in a country claiming to respect human rights for its citizens. That people with a present or past disability should suffer prejudice and exclusion is both demeaning and unjustified treatment when there is no other reason than their disability. It's shameful that to the restriction their disability imposes is added the gratuitous extra handicap that attitudinal physical barriers create.[19]

Morris also called for a Commission on Disability to standardise what was and was not a discriminatory practice.[20] This was the sixth attempt to get legislation for disabled people onto the statute books, and again it was supported by a number of MPs on both sides of the House. The Bill intended there to be equality of treatment for people with disabilities in employment, housing, education, transport, and - most importantly for museums - leisure. During its second reading, the Bill was placed ninth on the ballot for 31st January 1992. Bills in this position on the debating list rarely receive a full or even partial debate within the specified time, and the Bill duly failed to become law on this occasion and had to await a later reintroduction. It was perceived that the Bill was deliberately "talked out", a view exacerbated by Nicholas Scott, who was the Minister for Social Security and Disabled People, stating during the debate on 31st January 1992:

> Although discrimination still exists, there has been a considerable improvement in conditions for disabled people...It would be worthwhile to see what effect the Government's current approach might have...keeping up the voluntary approach, without ruling out legislation if the alternative shows itself to be inadequate.[21]

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[18] D. Benwell, "Civil Rights", vol.76, no.895, *New Beacon*, February 1992, London, 1992, p.59

[19] Quoted by D. Benwell, "Civil Rights", vol.76, no.895, *New Beacon*, February 1992, p.105 - 106

[20] D. Benwell, "Civil Rights", vol.76, no.895, *New Beacon*, February 1992, p.105 - 106

[21] As cited in D. Benwell, "Civil Rights Bill is 'talked out'", *New Beacon*, vol.76, no.896, February 1992, p.105 - 106

There had been even earlier support for a Commission in 1983, by a private member's bill of Mr Robert Wareing (Labour MP for Liverpool West Derby), after the Chronically Sick and Disabled Persons (Amendment) Bill was brought forward for its second reading. This had the support of all parties and sought to give disabled people recourse to a court of law, as well as setting up a Commission. The Minister with responsibility for 'the disabled' at that time, Mr Anthony Newton, said that the Bill was cumbersome and giving people recourse to legislation might make people wary of trying to make changes to current practices for fear of doing something wrong.[22]

The reluctance to provide legislation was finally overcome by the DDA in 1995. There was a great deal of support for this legislation, which was eventually passed through Parliament by the actions of the Rt Hon. William Hague MP. Disabled people themselves were consulted on the design of this legislation in the hope that the results would satisfy disabled people's needs. Unusually, the Act was to be introduced in stages, the first Act to receive Royal Assent to be so. As well as enabling the various bodies affected by the terms of the Act to make the necessary changes to comply, this perhaps also represented the difficulty of providing adequate legislation in this area. The extra time for each stage would also perhaps allow time for debate and maybe even amendments to the Act. Those who had lobbied for disability legislation, however, certainly didn't feel that the result went far enough and wanted a Disability Rights Commission (DRC) to give them a voice in the application of the legislation. This was not to happen at this stage but a National Disability Council was introduced and this mollified the situation. This would attempt to overcome the definition of "reasonable" so as to ascertain what organisations had to do to comply with the Act; disabled people would again be involved in making the decisions.

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[22] Editorial, "Discrimination", *New Beacon*, vol.67, no.800, December 1983, London, 1983, p.318

Twelve of the MPs involved in the formative stages of the DDA were contacted for the purposes of this research.[23] Of those who replied, two were emphatically in favour of the DDA.[24] The Rt Hon. Stephen Dorrell MP stated his strong support for a system that "...extends opportunity to disabled people and removes unnecessary and thoughtless discrimination."[25] Over-ambitious schemes to 'level the playing field' can be extremely costly and burdensome so successful parameters needed to be set. Tim Boswell MP was in favour of the DRC as a consultation body giving "teeth" to legislation which he felt had had a beneficial effect in offering new rights to disabled people, and in encouraging employers and service providers to respond to their new obligations.[26]

From the Scottish Parliament, there were responses from the four MSPs contacted who had been, or are, involved in the Disability Reporters Group, or relevant Ministerial positions. In his reply, Michael Matheson MSP, disability reporter on the Equal Opportunities Committee until early 2000, felt that Part III of the DDA was welcome and only time would tell if it was "sufficiently effective". It was also mentioned that a Scottish Commissioner has now been appointed to consider disability affairs. The Commissioner felt that the DDA was positive on the whole but bore out the sentiments mentioned earlier regarding the restrictions of devolution that it was unfortunate that the majority of equal opportunities legislation was still reserved to Westminster, including the DDA.[27]

Irene McGugan MSP, a former disability reporter for the Equal Opportunities Committee, and Shadow Deputy Spokesperson for Culture, considered the establishment of a Disability Rights Commissioner to be a

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[23] See Appendix D for further details of the MPs and MSPs contacted.
[24] The first Minister for Disabled People after the introduction of the DDA, the Rt Hon. Peter Lilley MP, refused to reply as I was not a constituent.
[25] Letter from the Rt. Hon. Stephen Dorrell MP, 9th May 2000
[26] Letter from Tim Boswell MP, 27th April 2000
[27] Letter from Michael Matheson MSP, 3rd May 2000

significant step forward because, despite the legislation introduced in 1995 which promoted equal rights for disabled people in business and public places, there have been "problems of enforcement."[28] A guide is to be produced for MSPs on the importance of making constituency offices accessible; this should enhance their knowledge as to what should be provided in their community under Part III. Irene McGugan thought that "making reasonable adjustments" was "too vague to be meaningful."[29] She acknowledged that there is still much to be done to decrease the difficulties experienced by disabled people in using leisure amenities. Her hopes are pinned on the implementation of the regulations applicable to buildings themselves in 2004 to improve the situation where she felt:

> ...the legislation has (not) promoted a sufficient improvement in the lives of disabled people, including access to leisure and related activities. We have not, however, carried out any investigation specifically into the situation as it relates to sight impaired people and their access to museums and galleries, largely I guess because no one has raised it as an issue.[30]

DISABILITY DISCRIMINATION ACT

> An Act to make it unlawful to discriminate against disabled persons in connection with employment, the provision of goods, facilities and services or the disposal or management of premises; to make provision about the employment of disabled persons; and to establish a National Disability Council.[31]

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[28] Letter from Irene McGugan MSP, Disability Reporter for the Equal Opportunities Commission, Scottish Parliament, Shadow Deputy Spokesperson for Culture, 10th May 2000.
[29] Letter from Irene McGugan MSP, 10th May 2000
[30] Letter from Irene McGugan MSP, 10th May 2000
[31] Disability Discrimination Act 1995, Chapter 50, Title

Whilst there has been no specific investigation into visually impaired people and their access to museums and galleries, it is important to understand that the DDA, in particular Part III, is indeed relevant to this issue and museums need to address it in compliance with the Act. Museums and other institutions have not been abandoned to finding their way through the Act and its implications alone, but successive Codes of Practice have been published as each stage of the Act has been prepared for implementation. The DRC, which did develop from the National Disability Council instigated by the DDA, is responsible for the production of these Codes of Practice. The penultimate Code was produced in 1998 and dealt specifically with the introduction of Part III of the DDA in October 1999. The most recent Code, however, was produced in 2002 to assist the implementation of the final stage of the DDA, regarding the removal of physical barriers to disabled people. This Code also absorbed the requirements of Part III and therefore is the Code referred to in this chapter.

Despite the restrictions imposed on the Scottish Parliament regarding equal opportunities legislation, the Scottish Executive in the Department for Education and Employment, consulted on the Codes of Practice in conjunction with the DRC.

The DRC is as much concerned with educating public opinion and promoting good practice as with enforcement and a non-confrontational approach. The DRC could decide to conduct a formal investigation into an alleged act of discrimination and has the power to require a person to give written or oral information for the purposes of a formal investigation. Non-discrimination notices are issued if a formal investigation shows that a discriminatory act was committed. These give details of the unlawful act and require production of an action plan to ensure future compliance with the DDA. Alternatively, a written agreement may be requested that the person or institution concerned will not commit any further unlawful acts, and this enables the DRC to agree not to take any relevant enforcement action. However, if the other party fails to comply with their agreement, the DRC may apply to a

county court/sheriff for an order to take action and, if it is felt that further such acts may be committed, application for an injunction can be made. The DRC can also assist people with legal advice and representation in bringing proceedings if the case raises a matter of principle and where it is unreasonable to expect the applicant to deal with the case unaided. All such actions by the DRC depend upon the qualification of various terms, "reasonable" and "disability" being perhaps the most relevant.

Part I of the DDA focuses on the issue of defining disability and is important for museums for understanding whom they should be attempting to serve with their extra access initiatives.

> 1 (1) Subject to the provisions of Schedule 1, a person has a disability for the purposes of this Act if he has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities. 1 (2) In this Act "disabled person" means a person who has a disability.

Section 2 (1) includes provision that people who have had a disability should be availed of the same services as those who still have a disability. Schedule 1 has eight sections which relate to impairment, long-term effects, severe disfigurement, normal day-to-day activities, substantial adverse effects, effect of medical treatment, persons deemed to be disabled and progressive conditions.[32] The definitions of "substantial", "long-term", "normal day-to-day activities", have proved contentious as to whom the Act actually covers. Even what classifies as a "physical" or "mental" impairment can be disputed. The Codes of Practice have perhaps helped resolve this issue in as much as they elucidate that "physical" and "mental" impairments include sensory impairments, and therefore visually impaired people. So, how disability is qualified redoubles in importance, as it applies to more people than might at first

[32] See chapter 2

seem likely.[33] The Code of Practice states that the definition of disability has been the subject of developing interpretation by the courts, and it remains an issue of much debate. Museums need to remain abreast of all these developments to ensure any changes they are planning comply with the needs of people with disabilities as defined by the DDA.

The person responsible for deciding issues of dispute is the Secretary of State for disabled people. As the DRC can provide interpretations of the DDA by which it can decide whether to take cases to court, so the courts themselves have to take into account any sections of the DDA which the Secretary of State has decided, "...appear to be relevant".[34] The Secretary of State will make consultations concerning any guidance he decides to make and will prepare drafts of the information which will be revised after witnessing any representations concerning its contents.[35] It could be thought that the Government is adopting a "light touch" in respect of defining discriminatory offences, and is in fact not imposing proper legal guidance. The Code of Practice which the DRC produces will be used by the courts as guidance.

Making provisions for alterations to existing buildings, or to new building design has often been a stumbling block in disability legislation. Such provisions had been included in the Chronically Sick and Disabled Persons Act of 1970 in Section 4

> Any person undertaking the provision of any building or premises to which the public are to be admitted, whether on payment or otherwise, shall, in the means of access both to and within the building or premises, and in the parking facilities and sanitary conveniences to be

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[33] DDA, Section 5, subsection (2) Schedule 2 modifies the provisions which enforce that a person who has had a disability has the same rights as one who has them now and who has had what classes as a disability continues to have it. Any regulations made in response to this Act "may" include people who have had a disability; so additional laws or rules enacted after 1995 in reply to the DDA only **may** include those who were once disabled.

[34] Ibid., subsection 3 (3)

[35] Ibid., Section 3 subsections (4) and (5)

> available (if any), make provision, in so far as it is in the circumstances both practicable and reasonable, for the needs of members of the public visiting the building or premises who are disabled.

This it seems was an earlier precursor of the DDA Part III, Section 21 (2). Goldsmith presents an interpretation of what Section 21 (2) actually means:

> What...section 21 (2) says to a person with a disability is 'If you come across a building which you find not to be conveniently accessible, but which you reckon should and could be made accessible to you and other disabled people, you can charge the person who owns the building with discrimination against you, take him to court, ask him to reconstruct the building, and then insist that he compensates you for the hurt he has done to your feelings.[36]

This is as much as the DDA allows people with disabilities to do. This is similar to the ADA as well, but there is a subtle difference in the presentation of the two pieces of legislation. America has a Access Standard. Compliance with this would negate an unreasonable charge of discrimination, a decision has been made as to what "reasonable" means. This Standard applies to new buildings and to pre-existing buildings. Britain does not have this. Such a Standard would, for reasons of Listed status discussed earlier in this chapter, be difficult to apply to museums housed in such structures already in existence. Goldsmith finds the real flaw in Section 21 (2). The terminology of reasonable is used and what is reasonable can only be ascertained during a visit, in other words at the time of the discrimination, not before, so such situations cannot be premeditated and prevented before their occurrence.[37]

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[36] S. Goldsmith, *Designing for the Disabled: A New Paradigm*, 1997, p.257
[37] S. Goldsmith, *Designing for the Disabled: A New Paradigm*, 1997, p.260

The idea that there could be an Access Standard in Britain is attractive, as then people with disabilities and building providers would know what to do. However, it would really be impossible to formulate such a Standard which would be acceptable to all due to the disparate nature of people with disabilities. There would have to be some sort of limits in such a Standard and so there would still be a feeling of discrimination against those whose difficulties were not met by the Standard. Inspectors would be needed to check every organisation and every change required to existing buildings, or to the designs for new buildings.

Goldsmith offers an alternative to the Access Standard of a graded certification system. This would provide people with disabilities with some peace of mind, when visiting a museum or any other building, as they would know what provisions to expect clearly, and there could be a mechanism for explaining why a higher level of certification could not be met by any particular building.

The major issues concerning museums in the DDA are in Part III, sections 19 - 21, *Goods, Services and Premises*. There has been debate about how far these recommendations affect museums but close analysis shows their relevance. Museums are not always seen as service providers but the emphasis placed on education, workshops, and important exhibitions makes them a service, as well as the fact that they provide for the leisure of the public and they need visitors to survive. Therefore, section 19 (1) does apply to museums, it being unlawful for a provider of services to discriminate against a disabled person in refusing to provide, or deliberately not providing, any service which he provides, or is prepared to provide, to members of the public. Disabled people are undoubtedly members of the public.[38] The types of services to which section 19 applies are listed in 19 (3). Museums fall into five of the eight categories mentioned: (a), access to and use of any place which members of the public are permitted to enter which is certainly a museum (b),

[38] See chapter 1

access to and use of communication, which a museum certainly has with interactives or text (c) access to and use of information service, the same as the above, (f) facilities for entertainment, recreation or refreshment, by which a museum again would qualify as visiting exhibitions can constitute a recreational activity, and several museums now have cafe facilities, and (g) facilities provided by employment agencies or under section 2 of the Employment and Training Act 1973, which relates to museum staffing. The Code of Practice emphasises the relevance of the DDA to museums in Section 1.10:

> ...[the DDA] applies to any person or any organisation or entity which is concerned with the provision in the UK of services (including goods and facilities) to the public or a section of the public...the Act applies to disabled people who use, or seek to use, the services so provided, whether as customers, buyers, shoppers, consumers, clients, patrons or service users.

DDA PART III SECTION 19, 20 AND 21

Museums are therefore also responsible for ensuring the standard of service provided to a disabled person and the manner of that service, as well as ensuring that the methods of provision of that service are not discriminatory, as stated in section 19 (1) (c) and (d). Section 20 reports on the meaning of discrimination in this context; disabled people must not be treated less favourably, for a reason related to their disability, than able-bodied people, and all treatment must be able to be justified. Section 21 details the duties to make adjustments. Section 19 (1) (b) highlights that it is unlawful to fail section 21 duties with the effect that it is made impossible or unreasonably difficult for a disabled person to make use of any such service. Section 21 shows what duties the Act imposes on providers of services to make adjustments to their methods of practice. Subsection (1) puts it succinctly:

> Where a provider of services has a practice, policy or procedure which makes it impossible or unreasonably difficult for disabled persons to make use of a service which he provides, or is prepared to provide, to other members of the public, it is his duty to take such steps as it is reasonable, in all the circumstances of the case, for him to have to take in order to change that practice, policy or procedure so that it no longer has that effect.

Section 21 concerns the responsibilities to make reasonable adjustments for people with disabilities and this, in the terms of the Code of Practice, is the 'cornerstone'[39] of the DDA and requires service providers to take positive steps to make their services accessible to disabled people. This goes beyond simply avoiding treating disabled people less favourably for a disability-related reason. Policies, practices and procedures need to be changed and provisions for people with disabilities need to be considered at all stages of museum projects. Section 5 of the Code of Practice provides examples of how policies, practices and procedures can be changed to further consider people with disabilities. For example, if it has not previously been a policy to provide auxiliary aids to assist with the interpretation of exhibitions then this will need to be reconsidered in the light of the DDA Part III. If it is a practice to offer guides to assist people with the interpretation of exhibitions, it is important that guides are always readily available. The procedure of how to provide for these extra auxiliary aids, financially and within the required time period to comply with DDA Part III will require careful consideration. Subsections (6) and (7) discuss that a provider of services would have to do nothing which would fundamentally alter the nature of their service but consideration of people with disabilities can lead to decisions which would enhance the service they provide.

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[39] DRC, *Code of Practice*, London, 2002, Section 4.1, p.24

DDA PART III SECTION 19

Section 19 (2) parts a) to c) all clarify that this section does apply to museums and galleries. The provision of the services of a museum does include the provision of any goods or facilities, with and without payment. The provision of these services is continuous and evolving and should take account of developments in technology. Provisions for disabled people cannot be considered once and then forgotten, a point reinforced in the Code of Practice, Section 4.20.

DDA PART III SECTION 20

Section 20 describes the method of discrimination. 20 (1) states discrimination occurs if (a) "for a reason which relates to the disabled person's disability, he treats him less favourably than he treats or would treat others to whom that reason does not or would not apply..." and (b) "he cannot show that the treatment in question is justified." (3) explains "justified treatment" in (a) [it is justified only if] in the opinion of the provider of services, one or more of the conditions mentioned in subsection (4) are satisfied, (b) it is reasonable, in all circumstances of the case, for him to hold that opinion (4) conditions are (a) to protect health and safety of any person, including disabled people, (b) in any case a disabled person cannot enter an enforceable agreement or give consent that the treatment is justified in his case, (c) relating to 19 (1) (a), the treatment is necessary to provide the service to anyone, (d) relating to 19 (1) (c) or (d), treatment is necessary to provide the service to the disabled person or anyone else, (e) relating to 19 (1) (d), the difference in terms of the provision reflects the greater cost of providing the service to a disabled person than other members of the public. The last point is slightly dubious - even more so in the light of section 20 (5) where (4) (e) is to be disregarded if relating to a section 21 duty. It is possible to cause discrimination by failing to comply with the duty to make

reasonable adjustments in relation to disabled people if the failure to comply cannot be shown to be justified.

DDA PART III SECTION 21

Service providers planning their response to the DDA have to accustom themselves to new terminology with possibly unfamiliar definitions of 'goods, facilities and services', 'service providers', 'reasonable adjustments', 'auxiliary aids and services', 'physical features' and providing a service by a 'reasonable alternative method'." The word "reasonable" appears often in the DDA much to the chagrin of disabled people and interpreters of the Act. Everyone's idea of "reasonable" is different. A dictionary definition, for example, provides the answer "showing reason or sound judgment" but perhaps more importantly "having modest or moderate expectations".[40] Disabled people should not expect a radical change; but their definition of "reasonable" would perhaps suggest a desire for more than "moderate" change. "Reasonable" is used four times in relation to alterations of physical features.

> Where a physical feature (for example, one arising from the design or construction of a building or the approach or access to premises) makes it impossible or unreasonably difficult for disabled persons to make use of such a service, it is the duty of the provider of that service to take such steps as it is reasonable, in all the circumstances of the case, for him to have to take in order to - (a) remove the feature, (b) alter it so that it no longer has that effect, (c) provide a reasonable means of avoiding the feature; or (d) provide a reasonable alternative method of making the service in question available to disabled persons. (section 21, subsection 2)

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[40] J. M. Sinclair, *Collins Concise Dictionary*, Glasgow, 1999, 4th edition, p.1232

SECTION 21 - CODE OF PRACTICE GUIDELINES

The fieldwork volunteers for this study were less than impressed with the lack of change the Act had brought about for them. "Reasonable" is used as a word to qualify other vague terms such as "substantial adverse effects" (Part I, section 3, subsection 2) The Code of Practice provides some advice in this area in Section 4. It states that there are no easy answers to providing any service which may be seen as "reasonable". If something is changed to make access easier for people with disabilities, for example the provision of an audio guide, this will not help all people with disabilities but could be classed as a reasonable alternative to the current services. "Reasonable" depends, therefore, on the circumstances of each case, and the definition should and must depend upon the type and size of the service provider in question, as well as the particular disability in question. Finances and the extent to which making a change to part of a service is practical are examples of considerations to the definition of a "reasonable" course of action for a service provider.[41]

The 'reasonable' proposition is to ask disabled people what "reasonable" is. Subsection 3 of Section 21 of the DDA states regulations may define reasonable in regard to finding an alternative means of providing a particular part of the service if the current presentation is not suitable, for example an alternative to steps, (Subsection (2) (c) and (d)), and also identifying those who would not have to take any action. Subsection 4 provides a more detailed explanation about auxiliary aids or services, with examples given of audio tape or sign language; here if such provisions would (a) enable disabled people to make use of a service or (b) facilitate such use by a disabled person, it is the duty of the provider of the service to take such steps as is reasonable in all circumstances in order to provide these types of auxiliary aids

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[41] DRC, *Code of Practice*, 2002, Section 4.23, p.30 The term "less favourable" is also used in a similar way to "reasonable"

The Code of Practice again provides advice as to what acceptable auxiliary aids are for different disabilities. For visually impaired people, suggestions include large print, Moon, Braille, email advertising, audio guides, accessible websites, provision of guides, touch facilities. The Code of Practice suggests that it is not essential to offer all of these facilities but it is against the law not to offer the prospect of introducing them to provide as good an opportunity for a disabled person to experience an exhibition as a non-disabled person.[42]

The problem with developing guidelines is that new research will change the best available advice: the service provider will have a duty to keep up with the recommended physical adaptations and modifications. In the absence of any certification mechanism, a service provider might successfully defend a challenge in the court on the reasonableness of access provision one year, and the year after, following the publication of new research or advice, be re-challenged and the same provisions found to be wanting. In Building Regulation matters compliance with the guidance is deemed to achieve compliance with the Regulation.

DISABILITY RIGHTS TASK FORCE

The DDA also led to the establishment by Westminster of a Disability Rights Task Force (DRTF) in December 1997 to secure comprehensive, enforceable civil rights for disabled people. The final report was published on 13th December 1999 and recommendations relevant to museums are considered below.

Whilst the definition of disability is discussed in chapter 1,[43] it is important to note that the Disability Rights Task Force in its list of

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[42] DRC, *Code of Practice*, 2002, Section 3.21, p.23
[43] See chapter 1

recommendations, asserts that "People who are certified as blind or partially sighted should be conclusively presumed to meet the DDA definition of disability."[44] There was obviously some dispute about this issue before the DRTF ruled, perhaps due to the confusing issue of partial sight.[45]

The DRTF report, in chapter 6, makes recommendations on access to goods, services and premises, Part III of the DDA. This chapter does not alter the categories or the definition of 'less favourable treatment' or 'adjustments' found within the DDA. The DRTF maintain that duties to make reasonable adjustments and factors to be considered to assess reasonableness should continue in civil rights legislation. But the Code of Practice should become legislation.

> Achieving the most integrated approach to the provision of services as is reasonably possible should be society's aim. We welcome the Government's request to the National Disability Council to promote the benefits of inclusive services in its preparation of the Code of Practice on the 2004 duties.[46]

The right to make reasonable adjustments should be treated as fundamental:

> It is a duty to disabled people at large; it is an anticipatory duty; it is continuous and evolving over time; and it is enforceable when an individual has been discriminated against. In future civil rights legislation, these rights and duties should be expressed in clearer terms.[47]

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[44] DRTF Report, London, 1997, chapter 3 "Defining Disability", subsection 3.4
[45] See chapter 2
[46] DRTF Report, London, 1997, chapter 6, "Access to Goods, Services And Premises", subsection 6.9
[47] DRTF Report, London, 1997, chapter 6, "Access to Goods, Services And Premises", subsection 6.4

The level at which the service providers should make reasonable adjustments has not been tested or set but justifications for failure to make reasonable adjustments should be removed.[48] The DRTF allows for the DRC to monitor courts if necessary.[49] This could be viewed as a "get-out" or perhaps not enough cases have been sent to court due to problems and dissatisfaction with the legislation, borne out by comments that there is not enough case-law yet and what there is should be kept under review and used to form recommendations if required when there is more evidence.[50] There should be a duty for all public authorities' functions to promote equal opportunities for disabled people in its services but thought needs to be given to the implications of having to make reasonable adjustments and the effect on the service providers [51] Manufactured goods and their instructions in accessible formats are considered in chapter 6., subsection 16, and European legislation and activities should be considered by all parties, the DRC, the DTI and the manufacturers. This type of investigation should apply to museums and the presentation of their information.

The DRTF states that the DDA should be concomitant with civil rights legislation. The European Convention on Human Rights advocates that everyone has the right to life (Article 2, subsection 1) and the right to liberty and security (Article 5). Prohibition of discrimination is also enforced by Article 14, stating that sex, race, colour, language, religion, political or other opinion, national or social origin, property, birth or other status, are all immaterial to the enjoyment of freedom.

The Human Rights Act 1998 is the response in Britain to the European Convention on Human Rights. Within Scotland, it is the Secretary of State for Scotland who will oversee the interpretation of the Act (Section 2) and Scottish courts will decide Scottish cases (Section 4). People may only bring

[48] Ibid., subsection 6.7
[49] Ibid., subsection 6.5
[50] Ibid., subsection 6.8
[51] Ibid. subsection 6.5

cases if they are victims or could be victims of actions made unlawful by the Act (section 7) and people are allowed to bring cases by any other law (section 11). There may be recourse to subordinate legislation and for Scotland this relates to Acts of the Scottish Parliament (section 21).

RNIB STRATEGIC DIRECTIONS 2000 - 2006

Professional bodies have begun to make responses to the DDA. In addition to the responses from museum support organisations, the RNIB has compiled a Corporate strategy 1994 - 2000 with five main priorities to advocate the priorities for them in the light of the DDA and the position of visually impaired people. The five priorities are to challenge discrimination and raise awareness, to extend the reach of their services across the UK, to increase the services available to older people, to improve the quality of the services offered, and to attract and use funds more effectively. Section 4 deals with the needs of people who are blind or partially sighted. Section 5 enumerates the ten factors external to the organisation which promote change, which includes devolution and the place of the RNIB in Scotland. Section 6 details the RNIB's vision:

> A world where people who are blind or partially sighted enjoy the same rights, responsibilities, opportunities and quality of life as people who are sighted.

Section 8 concludes the document with the Priority themes as the RNIB approaches 2006 - Promoting Social Inclusion and Challenging Discrimination; Timely Support and Prevention; Enabling Independence through Accessible Information; Improving Customer Focus; People, Culture, Governance and Structure; Raising Income and Awareness.

The RNIB's vision, as quoted above, is that organisations will come to accept that visually impaired people have as much ability to enjoy and be included in all aspects of 'normal' activities as the rest of society and to this end hope that working practices will be changed towards this requirement. The bodies which provide activities which rely more strongly on the use of sight, such as museums, are perhaps the organisations which the RNIB has uppermost in its mind

THE MUSEUM ASSOCIATION'S CODE OF ETHICS

The MA is the main museum support organisation in the UK. It produced a factsheet on 'Access' and a fourth edition of its Code of Ethics was launched in late 2001. The previously separate Code of Conduct for People who Work in Museums and the Code of Practice for Museum Governing Bodies have been amalgamated into this new Code which has taken on board the Nolan Committee's Seven Principles of Public Life: selflessness, integrity, objectivity, accountability, openness, honesty, leadership.[52] The Code of Ethics specifies that these principles are to apply to all who work in or for museums and all who serve on museum governing bodies.

The Code of Ethics aims to represent and articulate:

> ...a set of consensual values and standards of behaviour that are agreed at a particular time to define a relationship of trust between the museum and the communities it serves.[53]

The standards of behaviour should benefit the communities served by the profession and practitioners who place the public good before their own interest are acting ethically and behaving professionally. This

[52] Standards in Public Life: the First Report of the Committee on Standards in Public Life (1995), chaired by Lord Nolan, as cited in Museums Association ethics Committee, *Code of Ethics*, London, 2001, p.23

[53] MA, *Code of Ethics*, London, 2001, p.1

obviously applies strongly to museums as, according to the MA definition of 'museums', they enable people to explore collections for inspiration, learning and enjoyment, and they "collect, safeguard and make accessible artefacts and specimens which they hold in trust for society."[54]

The new Code increases the desirability to consult present and potential audiences and to improve the level of general accessibility of museum exhibits, and it is based around ten core values which society can expect museums to uphold. Six of the ten values are relevant to users of museums: 'Hold collections in trust on behalf of society' (value 1), 'Focus on public service' (value 2), 'Encourage people to explore collections for inspiration, learning and enjoyment' (value 3), 'Consult and involve stakeholders' (value 4), 'Research, share and interpret information related to collections to reflect diverse viewpoints' (value 9), 'Review performance to innovate and improve' (value 10).[55] Value 3 is perhaps the most directly relevant in that point 7 mentions disabled people

> Respond to the needs and wishes of people with disabilities. Have in place effective systems to ensure that buildings, displays and other services are increasingly accessible to people with physical, sensory or learning disabilities.[56]

All those who work for or govern museums should ensure that they:

> Recognise the public purpose of museums [and] put the public interests before other interests.[57]

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[54] MA, 1998

[55] The other sections are: Acquire items honestly and responsibly (value 5), Safeguard the long term public interest in the collections focusing on collections management policy (value 6), Recognise the interests of people who made, used, owned, collected, or gave items in the collections (value 7), Support the protection of natural and human environments (value 8)

[56] MA, *Code of Ethics*, 2001, value 3, point 7

[57] MA, *Code of Ethics*, 2001, value 2, point 1

Museums should also

> Uphold the highest standards of personal conduct and corporate integrity expected in public service.[58]

Museums should be promoted to appeal to a broader and more varied audience[59] and need to be able to respond to the requirements of different cultural groups.[60] This involves "...recognising the diversity and complexity of society and upholding the principle of equal opportunities for all."[61] They should have the generosity of spirit to be approachable at every point of contact and encourage a participative approach to learning as well as developing new audiences and deepening relationships with existing users.[62] Museums should take account of the potential effect of admissions charges[63] and make services available at regular times, regularly reviewing ways to make collections more accessible, either directly or in electronic or published form.[64] It should be made explicit if access needs to be restricted and why.[65] Provision should be made for keeping collections accessible whenever a building that houses collections needs to be closed or isolated.[66] Value 4, point .2 advocates the use of advisory groups: access working groups are essential to the success of any museum for people with disabilities and it is gratifying to see that this is recognised in the Code, and also the fact that the views of participants should be respected and confidences protected.

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[58] Ibid., value 2, point 2
[59] Ibid., value 3, point 3
[60] Ibid., value 3, point 6
[61] Ibid., value 3, point 1
[62] Ibid., value 3
[63] Ibid., value 3, point 8
[64] Ibid., value 3, point 11
[65] Ibid., value 3, point 12
[66] Ibid., value 3, point 13

MUSEUMS AND SOCIAL JUSTICE

This document was published on 15th November 2000 by the SMC, as a response to the increasing emphasis on social inclusion in society and to show the commitment of the major museum body in Scotland. A working group of eight museum professionals devised the recommendations in May 2000 and, although Scotland has its own Parliament and responsibility for culture, the publication of the Westminster Parliament's Department for Culture, Media and Sport's *Centres for Social Change: Museums, Galleries and Archives for All*, is drawn upon here for identifying barriers for social inclusion.

The aim of the document is "...to encourage everyone working in the museum sector, and bring the potential role of museums to the attention of others tackling inequalities and disadvantage."[67] The SMC hopes that the guidelines will be "...a springboard for museums to work with other organisations in partnership and for those partners to appreciate the potential role of museums and galleries."[68] The SMC, according to its Chair at the time of the introduction of this document, Professor Malcolm McLeod, has "no choice in this matter..."[69] to advocate the right of everyone to engage with their culture and history no matter what their circumstances.

The working group believe a five year programme to develop and implement a Social Justice Strategy is necessary to combat barriers to inclusion; with the DDA six years old, it is perhaps telling of the scale of the problem that programmes of such a length are still necessary. It also touches on the scarcity of resources amongst museums to concentrate on audiences in such detail. Four barriers are identified, similar to those in the DCMS publication, *Centres for Social Change: Museums, Galleries and Archives for All*:

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[67] SMC, *Museums and Social Justice*, Edinburgh, 2000, foreword, Allan Wilson MSP, Deputy Minister for Social Justice, and Margaret Curran
[68] SMC Director, Jane Ryder, cited in SMC, *Museums and Social Justice*, 2000, p.3
[69] Ibid., p.1

institutional; personal and social; related to perceptions and awareness; and environmental. The document then details these barriers, institutional being confined to the workings of the museum itself, opening hours, staff attitudes, rules and regulations, exhibition policies, signage, community involvement and "lack of adequate provision of services or facilities for people with disabilities."[70] The visitor can have problems in feeling welcome in a museum for personal or social reasons, lack of literacy skills, low income, lack of social contact, low self esteem and homelessness. These problems lead to perceptual and awareness issues of 'museums are not for us'. The elements here are fairly basic and it is perhaps worrying that policy documents are still formulated at this level. This may be to do with attitudes within society and the slow movement to change.

That is not to say that museums and galleries are not thinking about social justice strategies; the SMC document provides six case studies as proof, and the fieldwork for this thesis highlights more ideas, particularly amongst the exhibitions themselves. The NCS also emphasises the importance of social inclusion and museums need to recognise their activities in these terms.[71] *Museums and Social Justice* has six main aims: to encourage museums to place social inclusion at the centre of their policy and practice, to increase awareness of organisations working towards social inclusion of the role of museums, to generate a wide debate about the social role, ethos and management of museums in the context of the NCS, to show how museums can develop effective social justice strategies to meet current social demands, to demonstrate the contribution museums are already making towards social inclusion, and to provide examples of good practice through case studies. It recognises cost and time restraints, hence the three year programme, but emphasises that the barriers it identifies to inclusion and therefore social justice must be broken down.

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[70] SMC, *Museums and Social Justice*, 2000, p.8

[71] Chair of Working Group, Mark O'Neill, Head of Museums and Galleries, Glasgow City Council, cited in SMC, *Museums and Social Justice*, 2000, p.12

The first two years should be spent establishing a picture of the community profile, making contacts, organising a tester pilot project, evaluate the projects and draw up the Social Justice Strategy for the next three years. The third year sees the start of implementing the Social Justice Strategy and a review of the museum itself to ensure its structure is socially inclusive. The DDA is seen as important in the Social Justice Strategy, with year 1 requiring an Access Audit of the museum. Disability in combination with other social exclusion factors is highlighted as a particular problem. Best practice standards are also developing in connection with disability. The issue of funding is also highlighted to show the major resource difficulty for museums and social issues. Funding is available but only for those who demonstrate a commitment to social justice in their own budgets first, and it is increasingly becoming a key requirement for public funding. Partnership funding is expressed as the way forward but this can only be achieved with adequate research.

Museums and galleries have a role to play in these partnerships as they are on a par, according to the SMC, with the public and voluntary agencies who will naturally engage in improving welfare: museums are not luxury institutions but "...an essential part of civic society...".[72] This is another argument for the use of 'social justice' as it is a matter of rights and citizenship, not welfare and privilege, to have access to cultural heritage. Social inclusion and exclusion comprise separate elements which are interlinked and it is because of this that museums can play a role. Low income, listed in the social exclusion definition above, can lead to lack of education which can lead to cultural exclusion at least. Museums can provide free access to education institutions and extra workshops to enhance a person's access to their cultural history and therefore their education.

It is unfair to assume that the fact that people choose not to visit museums and spend their leisure time in other ways, does not mean that this is the reason people from 'excluded' groups tend not to visit. "Until everyone has

[72] SMC, *Museums and Social Justice*, 2000, p.1

been offered an opportunity to become museum users in ways which recognise the realities of their lives, the barriers to visiting or using museum services are so great that many people have not in fact been offered a real choice at all."[73] This may or may not be the case.

SCOTTISH ARTS COUNCIL

The Scottish Arts Council does not have a specific response to the DDA in a similar vein to that of the SMC, but disability does feature within its business plans. For the years 1998-1999 and 1999-2000, one of the seven objectives featured within the plan is:

> To help remove barriers to the enjoyment and experience of the arts.[74]

A subsection of this objective was to aim to increase access for people with disabilities to arts in general, alongside others who are "socially disadvantaged".[75] The aim of the SAC is to create a dynamic arts environment which enhances the quality of life for everyone living in Scotland, so it is encouraging that people with disabilities feature within the objectives to achieve this, and, indeed, the SAC postulates that it is committed to equal opportunities and access for all.[76] The Business Plan for 1999-2000 is intended to shape the development of the organisation until 2002 and the document acknowledges the difficulties for people with various disabilities to access buildings and exhibitions, and aims to make removing the barriers to people with disabilities a priority.[77] The initial recommendations are to support the development of existing disability arts organisations, including Project Ability, based in Glasgow,

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[73] SMC, *Museums and Social Justice*, 2000, p.10
[74] SAC, *The Plan 1999-2000*, Edinburgh, 1998, p.10, Objective 6; and *The Plan 1999 - 2000*, Edinburgh, 1999, p.12, Objective 6
[75] Ibid., p.12
[76] SAC, *The Plan 1999-2000*,1999, p.1
[77] SAC, *The Plan 1999-2000*,1999, p.27

and Artlink, based in Edinburgh.[78]

The SAC obviously understand the difficulties and intend to address the situation and it will be interesting to assess how far things have changed as a result of their Business Plans. There was also contained within the Plan a planned investment of £2 million into attracting audiences back into the arts and also an encouragement to the Scottish Parliament to make arts an integral part of the planned Social Inclusion Partnerships with the more deprived communities in the country. None of the museums encountered in the research had been contacted to assist with a Social Inclusion Partnership at this stage, but the regions included in the study are included within the Parliament's areas in need of further work within the community. The SAC have developed a *Cultural Diversity Strategy 2002 - 2007* to progress their work in the next five years.

CENTRES FOR SOCIAL CHANGE: MUSEUMS, GALLERIES AND ARCHIVES FOR ALL

The subtitle of this publication, "Policy guidance on Social Inclusion for DCMS funded and local authority galleries and archives in England", indicates that it only refers to museums in England but it is pertinent to consider it for Scottish museums as the SMC base their *Museums and Social Justice* on it and museums in different countries can learn from each other. It does raise the issue of what controls independent and university museums, whether they rely on their own policies and who regulates these. Alternatively, do they take their governance straight from parliamentary legislation?

Chris Smith,Secretary of State for Culture, Media and Sport at the time of the guidelines in May 2000, in his foreword endorses museums as a "...focal point for cultural activity in the community..." He also states a museum

[78] Ibid., p.15

"...gives people a sense of their own identity, and that of their community." He sees museums as able to do "...more than this, and act as agents of social change in the community, improving the quality of people's lives through their outreach activities."[79] The importance of the community role of museums is not to be underestimated therefore. The policy aims to enhance this.[80]

There are four key questions in forming a successful policy: How can museums use their collections to make a difference to the lives of people at risk of social exclusion? How can museums develop their services so that they can improve the quality of life of people at risk of social exclusion? How can we work in partnership with others to make our activities and theirs more successful? What impact can our activities have on creating positive social change?[81] Chris Smith also acknowledges the length of time enacting such change is likely to take, and the role re:source will play in encouraging museums, as well as libraries and archives, to enhance this end.

There are eleven main policy objectives identified from which the SMC drew their policies. Social inclusion, exclusion and justice should not be to the detriment of other important museum duties, such as acquisition and conservation. How a museum can advance social inclusion policies depends on the area in which it is situated and people at risk of social exclusion should be consulted about their needs and aspirations. To this end, collections should reflect the cultural and social diversity of the actual and potential audiences, museums should be local learning places, should forge partnerships, should develop projects which aim to improve the lives of those at risk from social exclusion, and should consider how they can develop their role as "agents of

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[79] DCMS, *Centres for Social Change: Museums, Galleries and Archives for all*, London, 2000, p.1

[80] The policy applies to museums as well as galleries and archives, (although for the purposes of discussion here, a gallery equates with a museum)

[81] DCMS, *Centres for Social Change: Museums, Galleries and Archives for All*, 2000, Section 3: Social Inclusion Policy for Museums, Galleries and Archives, p.13, 3.3.

social change".[82]

A six point plan is provided to assist museums: they should identify people socially excluded, where they are and discuss their needs with them; assess and review current practice; develop strategic objectives and prioritise resources; develop the services and train staff; implement and publicise services; and evaluate success, review and improve. There are also six identified challenges: sustainability and long-term resource problems, a need for organisational and cultural change, a need to respond to the Information Communication Technology environment, a need to formulate community ownerships and partnerships, and a need to integrate museums into a wider service framework, and to demonstrate benefits and outcomes.[83]

The Social Exclusion Unit's definition of social exclusion is highlighted in *Museums and Social Justice*, Section 2: Identifying the Causes of Social Exclusion.[84] This document utilised these causes and all relate in some way to people with disabilities. Amongst those subjects specifically itemised were opening hours, which should be determined with staff and visitor in mind, poor staff training, admissions charges and poor signage. Difficulties with access to the museum building, and the ability to interpret exhibitions whilst there, are again highlighted as issues to address.

The DCMS has completed research through the Social Exclusion Unit in the Cabinet Office, and Policy Action Team number 10 which focused on Art and Sport. This recommended assessing provision of expenditure on culture and leisure geographically and according to an assessment of community needs. This would hopefully result in an appropriate level of provision according to regular community contact with all potential users and would

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[82] DCMS, *Centres for Social Change: M museums, Galleries and Archives for All*, 2000, p.5
[83] Ibid., p.5 - 6
[84] Ibid., p.10-11

encourage local authorities to develop plans for community based culture and leisure activities. The DCMS response to this report to implement the recommendations is: "To promote the involvement in culture and leisure activities of those at risk of social disadvantage or marginalization, particularly by virtue of the area they live in; their disability, poverty, age, racial or ethnic origin. To improve the quality of people's lives by these means."[85]

The DCMS has also produced its key components of a social inclusion policy, as a framework not a solution. The framework needs to be "developed, implemented and monitored" by museum users at risk of social exclusion themselves, and by the governing body as part of an overall policy of inclusion in the museum.[86]

The DCMS has produced another publication, *Museums for the Many*, with information on how to develop access policies and this document takes from and builds on the standards and detailed examples given in its precursor. The three stages are: Access, becoming an inclusive and accessible organisation; Audience development to reach new audiences and creating appropriate and relevant events or exhibitions; Museums as agents of social change. There is no time-scale provided for this three-stage plan but sometimes activities can encompass elements of more than one stage.

The Access objectives encompass the institutional barriers mentioned above to achieve the widest possible access to collections and knowledge, and to remove physical, sensory, intellectual, cultural, attitudinal and financial barriers. Information technology is also important, using the National Grid for Learning. Audience development has four objectives which cover regular outreach projects and consultation with under-represented groups should take place to ensure activities are appropriate. Even a small museum should try

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[85] DCMS, *Centres for Social Change: Museums, Galleries and Archives for All*, 2000, Section 1: Why a Social Inclusion Policy for Museums, Galleries and Archives?, p.7

[86] Ibid., Section 3: Social Inclusion Policy for Museums, Galleries and Archives. 3.1, p.12

to contact one 'at-risk' group per year: people at risk of social exclusion should be consulted about their needs and aspirations. Agents of social change involves forging partnerships, developing projects to improve the lives of people at risk from exclusion, and consider developing their role as agents of social change.

A direct reference is made to people with disabilities in Policy Objectives, Access, (b), p.14 "Buildings and services should be accessible to all. Museums, galleries and archives have a duty under the Disability Discrimination Act to make reasonable adjustments to help people with physical or sensory disabilities, or learning difficulties, overcome any 'substantial disadvantage' they encounter. This could include better signage around buildings, the size and positioning of captions, providing seating, and the possibility of installing induction loops for audio-visual presentations. To achieve this, it is recommended that a consultation group consisting of disabled users and staff is established to review the facilities and services."

Museums are therefore given some guidance in approaching the DDA be it from the governmental sources and the Code of Practice, or from their own support organisations. Visually impaired people can also be encouraged by the planned improvements to the RNIB. Visually impaired people, however, have been discouraged by the method of implementation of the DDA and museums need to be aware of this when adapting the long-term plans proposed by their support organisations.

Whilst the above mentioned long-term strategies may appear to be the most sensible way forward for museums when tackling a relatively new scenario, particularly when they have other pressing needs to accommodate, if people with disabilities do not see some change within museums quickly, then they will become even more discouraged from visiting museums and with the industry itself. Therefore, although there are long-term plans for improvement, small changes need to be made quickly and publicised as a change to the

current presentation of the museum environment. This will both acknowledge the DDA and also acknowledge the wishes of the visually impaired people who already visit museums or who would like to experience a leisure resource they feel is closed to them.

The fieldwork chapters which follow indicate some of these minor changes which can be made by museums to encourage a new audience to add life to their institutions. The best way to establish the most appropriate minor changes for an individual museum, is to question the visitors who already attend about improvements to the service or to make contact with the organisations which support people with disabilities in the local area. This does not need to become the organisation of a working group immediately, but the initial groundwork could prove useful for the future and enable some partnership work to improve the presentation of the museum both literally and within the public eye.

Museum professionals are obviously concerned about the implications of the DDA and the *Museums Journal*, the journal produced by the main museum support organisation, the MA, has provided a forum for discussion of the legislation and presentation of what some museums are doing to embrace the new requirements. A more complete discussion of the presentation of issues relating to people with disabilities within the *Museums Journal* over the past two decades is presented in chapter 4, but it is worth considering here the inclusion of matters relating to the DDA.

Obviously, articles or features relating to the DDA occur primarily within the 1990s as this was the time of most of the Parliamentary discussions about the legislation and the beginnings of its implementation. However, the earliest mention of disabled people and access issues is in December 1989 when Arts Integration Merseyside called for a change in the law to allow

disabled people complete equality of access to museums and galleries.[87] The MGC produced a series of guidelines in 1992, which provoked both positive and negative discussion.[88] The MGC featured again regarding the publication of its directory and a grant to the Area Museum Councils to assist with its distribution,[89] and an evaluation of the Disability Resource Directory[90] all received much publicity in the period 1992-1995.

In 1995, articles relating to the DDA began to appear, starting with reports of the initial forays such as The *Civil Rights (Disabled Persons) Bill*,[91] and its transmogrification into the *Disabled Rights Bill*, considering the statutory rights of non-discrimination. In the years 1996 to 1998, there were features about the basics of the DDA and February 1999 saw a more in depth focus on the Disability Discrimination Act with the imminent advent of the implications of Part III.[92]

The DDA and its implications have certainly made museums aware of the difficulties people with disabilities face when visiting an exhibition, or attempting to gain access to the museum building itself. Museum support organisations recognise the need for action and the policy documents designed cover many of the areas which the volunteers who assisted with the fieldwork for this research identified as problematic. Long-term action plans are useful to combat social exclusion of people with disabilities from the cultural sector, and museums have a lot to appreciate when they try to attract people with

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[87] C. Fewster, "Merseyside Access Campaign", *Museums Journal*, vol.89, no.12, December 1989, London, 1989, p.15

[88] P. Shipley, "MGC News",*Museums Journal*, vol.92, no.11, November 1992, London, 1992, p.40 and M. Greene, "Disability Code Left Stranded", *Museums Journal*, vol.92, no. 12, December 1992, London, 1992, p.10

[89] C. Conybeare, "MGC relaunches directory after poor take-up", *Museums Journal*, vol.95, no.2, February 1995, London, 1995, p.10

[90] P. Shipley, "MGC news", *Museums Journal*, vol.95, no.12, December 1995, London, 1995, p.40

[91] C. Keen, "Care and Access", *Museums Journal*, vol.95, no.2, February 1995, London, 1995, p.35

[92] H. Falconer, "Opening Act", *Museums Journal*, vol.99, no.2, February 1999, London, 1999, p.28 - 29

disabilities, or visual impairments to be specific to the thesis, into their audience. It is the speed with which initiatives are taken up and change is implemented or at least planned, however, as well as its success, which will impress visually impaired people and encourage them to become part of museum audiences. Addressing social exclusion within the cultural sector specifically is a challenge to be faced by museums and provisions for visually impaired people potentially form a very important part of it.[93]

[93] See chapter 1 for some further discussion of social exclusion.

Chapter 4

EXHIBITIONS

Although, "Eighty per cent of our experience is gained through our eyes",[1] people with visual impairments have to rely more on their other four senses to participate in daily life. When considering exhibitions, sight is the main sense used for the interpretation of the majority of displays. Other senses can be appealed to in specific exhibitions. Smell can be used for atmosphere or authenticity of setting, for example, but the one sense visitors to museums use primarily is sight. Visitors with visual impairments cannot rely on sight as the main method to interpret museums and would prefer to be able to touch to discover exactly what the objects they were encouraged to see are like. "Do Not Touch" signs are common in museums and galleries, as are cases and barriers, and people are constantly warned from early childhood, "don't touch or you'll break something", but for people with sight difficulties especially, as much as for any other person,

> ...Paramount is the appeal to the imagination to touch and sensory experience and the exploitation of residual vision...There is no sight without insight...[2]

The fieldwork for this thesis revealed that the greatest desire amongst the volunteers, and the most difficult thing for museums to provide amongst their own collections, is touch facilities. One way to combat this is to encourage temporary exhibitions using touch or to develop handling boxes which contain objects specifically to be touched. However,

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[1] Editorial, "Access and Disability", *Museums Journal*, Vol.89 No.5, May 1989, London, 1989, p.11
[2] Ibid., p.11

> The recent surge of 'touch' exhibitions may be laudable, but are we putting the cart before the horse in attracting and providing activities for people with special needs, before our buildings have been sufficiently adapted to cater for them in terms of access and safety?[3]

The issue of access to buildings is discussed in the subsequent chapters concerning the fieldwork part of the research but, to focus on what is inside the museum, rather than on the problems of entering the building, requires a look at the appeal of exhibitions. It is very difficult to quantify statistically the exhibitions by or with a specific reference to people with disabilities, or visual impairments particularly, as there is not a directory of exhibitions for Scotland. The fieldwork undertaken for this thesis, however, has provided personal experience of several exhibitions.

A survey was undertaken to try to achieve a background in the general publication of information about exhibitions and other issues with relevance to provisions for people with disabilities, and specifically visual impairments. The Museums Association's *Museums Journal,* the primary museums periodical in the UK, and the easiest accessible documented source of museum activity, was surveyed to try and achieve an overview of the development of such exhibitions and the general publication of information about them and other issues related to disability in the museums' community. Editions from 1980 to 1999 inclusive were chosen to record activity over the past two decades, and this was complemented with the *Museums Bulletin* from January 1980 to March 1989, a periodical which merged with the *Museums Journal* in 1989. The *Museums Journal* became monthly after the merger, having been quarterly beforehand. This merger probably accounts for the increase in the number of articles about disability in general between the 1980s and the 1990s. Another journal, *Museums Practice*, began in 1996 as a supplement to the *Museums Journal* and this is included in the assessment

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[3] G. Massey, as cited in "Access and Disability", *Museums Journal*, vol.89, no.8, August 1989, London, 1989, p.11

below from the years 1996 to 1999.

It was not the purpose of the surveys of the periodicals to make any form of comparison between each other, or between the occurrence of articles with reference to disability and articles on other subjects. The point of interest was to see if disability was featured at all and whether the emergence of the DDA made any difference to the prevalence of the articles.

ILLUSTRATIVE MATERIAL

Images of disabilities, particularly on the cover of the journals, occurred less frequently than articles or mentions of related issues. The *Museums Journal* had four covers portraying people with disabilities between 1980 and 1999 all of which used the image of a wheelchair, indicating that this is the most recognisable representation of disability despite there being many other types of disability. April 1990's issue was the first such cover, featuring a person in a wheelchair using the ramping system at the Museum of Science and Industry in Manchester. June 1992 featured an image of a visitor in a wheelchair and June 1994 again used the image of a person in a wheelchair and February 1999 has an image of the wheelchair symbol on the cover indicating an article on the Disability Discrimination Act.

DATA

The *Museums Journal*, from 1980 to 1999, underwent several format changes, but it maintained a Contents page and it is from these that the number of articles are calculated. The number of articles which were about disability in general, not necessarily about exhibitions are detailed in Figure 4.

The *Museums Journal* changed its publication frequency from quarterly to monthly in 1989 resulting in an increase in the annual number of general articles, but not articles on disability, until the late 1990s.

The *Museums Bulletin* did not have a comprehensive Contents page from 1980 to March 1989, so there is no completely satisfactory way to compare the two publications. The simplest way found was to count the sections which appear regularly in a similar way to the articles in the *Museums Journal*, and the results are represented in Figure 5 The sections have a more general basis than the articles and include more than one subject-matter, therefore a detailed analysis of the section proved to be necessary to uncover references to disability.

There were no major articles containing information about exhibitions by disabled artists. The larger articles in the *Museums Journals* published in the 1980s included four mentions of museum work with relevance to disabilities. Two focused on exhibitions, both particularly for people with visual impairments: *Sculpture for the Blind* by Fiona Pearson,[4] and *A Sense of Touch* by James Ford Smith[5] respectively. The remaining two focused on general disability issues, *New Services for the Disabled in American Museums* by Elizabeth Kelly,[6] and *Visitor Services and People with a Disability* by various authors, respectively.

In the 1990s, one featured article discussed an exhibition and visual impairment specifically, "Challenging Perceptions" by W. Kirby, reviewing the Parthenon exhibition at the British Museum.[7]

> Work produced by disabled artists is likely to get disabled people more interested in visiting the gallery...It is important that galleries do not see the work of disabled people as fringe, one-off events, but that they are always considered within the general programming of the organisations.[8]

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[4] *Museums Journal*, vol. 81, no.1, June 1981, London, 1981, p.35 - 37
[5] *Museums Journal*, vol 83, no.2-3, September - December 1983, London,1983, p.113
[6] *Museums Journal*, vol. 82, no.3, September 1982, London, 1982, p.157 - 159
[7] *Museums Journal*, vol.98, no.12, December 1998, London, 1998, p.19
[8] *Museums Journal*, vol.89, no.12, December 1989, London, 1989, p.15

Figure 4 - Articles in *Museums Journal* 1980 - 1999 concerning issues of disability

Year	Articles	Articles on disability	Year	Articles	Articles on disability
1980	47	0	1990	145	0
1981	47	1	1991	161	0
1982	50	1	1992	110	0
1983	41	1	1993	127	0
1984	40	1	1994	135	1
1985	47	0	1995	198	0
1986	41	0	1996	201	1
1987	57	0	1997	195	1
1988	53	0	1998	163	1
1989	136	0	1999	214	2

Figure 5 - Articles within *Museums Bulletin* 1980 - 1989 regarding issues of disability

Year	Total sections	References to disability
1980	155	3
1981	162	16
1982	158	1
1983	150	6
1984	157	6
1985	167	2
1986	146	7
1987	122	3
1988	114	8
1989	27	0

The first major article about disability and museums appeared in June 1994: *The Disabling Society* by Rebecca McGinnis, discussed how changes can be made to society, the approaching legislation, case-studies, consultancy and training. There was no mention of specific exhibitions, however. The final articles of the decade focused on the prevalent mood of "social inclusion" These were not solely focused on disability but recognised it as a limiting factor in an entry into all aspects of society: *An Open Door policy* by Lucie Carrington, discussed social inclusion and exclusion, attitudes, and case studies, and *The Regeneration Game* by Richard Sandell, concerned how and why we should combat social exclusion.[9]

DEVELOPMENT TO LAYOUT

There were changes in the presentation of disability issues in the *Museums Journal* from April 1989, with the advent of monthly publication. A regular feature began, ensuring that disability issues were given a regular place. There were other regular features but the content of the section devoted to disability issues is interesting to consider for this research. The sections devoted to disability are not included in Figure 4 as the contents of that figure are specific individual feature articles in their own right. The sections detailed below each have several pieces of information in them and are worthy for the purposes of this research to be considered in their own right.

These featured sections continued under various titles until mid-1998. There were several mentions of exhibitions within these regular features, with some having a specific reference to visually impaired people:

Between April 1989 and April 1991, the section entitled 'Access and Disability' appeared each month, except January 1990.

[9] *Museums Journal*, vol.99, no.7, July 1999, London, 1999, p.26 - 31

'Access and Disability' became 'Access' in May 1991 but followed a similar format to its predecessor. It continued until June 1992 when it moved from a section in the 'News' article to a section on the 'Notice-board'.

In September 1992, 'Access' became 'Care and Access' until March 1995. The format remained the same and it appeared in every issue of the *Museums Journal* apart from April 1993, June, August, October and December 1994.

'Care and Access' became 'Open Doors' in March 1995, continuing until November 1998, when the existence of a regular feature on disabilities ceased. 'Open Doors' appeared every month except December 1997, and May, June, August and December 1998.

ACCESS AND DISABILITY

The 'Access and Disability' 'Openings',section had 11 exhibitions, with 7 having such a specific reference (Figure 6).

There were also two further mentions of exhibitions: the Yorkshire Sculpture Park had a sensory trail specifically for people with disabilities,[10] and there was also an article concerning an exhibition for people with learning difficulties at the Smith Art Gallery.[11]

Exhibitions were also reported between May 1991 and June 1992, but not in the *Access* section, and none were taking place in Scotland. A general exhibition feature[12] entitled 'Openings' reports of contemporary tactile sculptures as a permanent feature at the Castle Museum in Nottingham.

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[10] *Museums Journal*, vol.90, no.1, January 1990, London, 1990, p.23
[11] *Museums Journal*, vol.90, no.9, September 1990, London, 1990, p.20
[12] *Museums Journal*, vol.92, no.1, January 1992, London, 1992, p.18

Figure 6 - Exhibitions with specific reference to people with disabilities in *Museums Journal* 'Access and Disability' section, 1989 - 1991

Date	Venue	Exhibition	Narrative
1989			
Apr	Bolton Mus. & Art Gall.	Cutting Edge	Sculpture which can be touched
June	Brighton Mus & Art Gallery	Serendipity Snowden	Workshops by a disabled artist
Aug	(General article)		Feature on Touch exhibitions
Sep	Glasgow School of Art	Art at Heart	Sculptures by blind sculptor
Nov	National Museum York	Please Touch	Open evening for handling workshops
Dec	Victoria & Albert Museum	Historic Fabrics	Tactile fabrics
1990			
Jul	Hunterian Museum	A Sense of Touch	Opportunity for handling items
Nov	British Museum	Porcelain for Palaces	Handling workshops
Dec	Tate Gallery, Liverpool	New Light on Sculpture	Handling opportunities
1991			
Jan	Tower of		Handling opportunities
Mar	Croydon Arts & Museums		Plans for non visual senses exhibition

The collection was launched with the exhibition *Sculpture to Touch*, which included pieces on loan from the Henry Moore foundation and the Arts Council collection. There was also a Public Record Office project, which appealed to all disabilities.[13] The National Portrait Gallery was featured in an article on its refurbishment, which also discussed an exhibition of six sculptures and the provision of four thermoforms. Gloves were provided to enable the sculptures to be touched.[14]

CARE AND ACCESS

There were no articles concerning exhibitions in the 'Access' section and the 'Care and Access' section only mentioned information about one exhibition, the mezzanine area of the London Transport Museum, which discussed audio visual, lighting, colour and size of labels.[15]

Other exhibition information did occur in the *Museums Journal* between September 1992 and March 1995. The 'Specials' section contained five mentions of museum activity related to disability issues; lectures for visually impaired people by the Leicestershire Archaeological Unit were featured[16] as were two exhibitions with a special reference to visually impaired people; *Freedom to Touch* at the Laing, Newcastle-upon-Tyne, and *In Touch with the Past* at Glasgow Museums.[17] Independently from this section, an exhibition entitled *Please Touch* at Norwich Castle Museum, was included, and an article describing various types of interpretative aids for visually impaired people.[18] The National Touring Exhibition Service (NTES) advertised touch panels, the first such panels to go on tour accompanying an exhibition.[19] The 'Exhibitions on

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[13] *Museums Journal*, vol.92, no.2, February 1992, London, 1992, p.38
[14] *Museums Journal*, vol.94, no.1, January 1994, London, 1994, p.40
[15] *Museums Journal*, vol.94, no.2, February 1994, London, 1994, p.43
[16] *Museums Journal*, vol.92, no.5, May 1992, London, 1992, p.22
[17] *Museums Journal*, vol.94, no.6, June 1994, London, 1994, p.27 - 33
[18] *Museums Journal*, vol.94, no.3, March 1994, London, 1994, p.20 - 21
[19] *Museums Journal*, vol.94, no.12, December 1994, London, 1994, p.50

Offer' section advertised an exhibition from the Laing Art Gallery in Newcastle-upon-Tyne, *Disability: Image and Experience.*[20] This was a multimedia exhibition of work by disabled artists selected to form a popular and accessible exhibition and to create a deeper understanding of disability and the issues raised.

OPEN DOORS

The 'Open Doors' section also reported exhibitions; from fifteen in total, eleven were particularly for people with visual impairments, or with provisions for people with visual impairments, two of which are about *Dialogue in the Dark.* (Figure 7)

There were other mentions of exhibitions outside the 'Open Doors' section. Of eight in total, six were particularly for people with visual impairments, or with provisions for people with visual impairments, two of which are about the *Parthenon* exhibition at the British Museum. There was an illustration of an exhibition at the Plymouth Dome, which had an audio tour for people with visual impairments,[21] an installation for visually impaired people at Wolverhampton,[22] a feature about an exhibition made from the negative comments of people with disabilities and visual impairments,[23] and also a 3D interpretation for visually impaired people of an exhibition at Wolverhampton,[24] and two mentions of the *Parthenon* exhibition, one a feature and one a review.[25]

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[20] *Museums Journal* vol.94, no.6, June 1994, London, 1994, p.vii
[21] C. Conybeare, *Museums Journal*,vol.95, no.5, May 1995, London, 1995, p.10
[22] L. Carrington, "Wolves improves access for blind", *Museums Journal*,vol.96, no.6, June 1996, London, 1996, p.10
[23] D. Dean, "Permission to stick on labels", *Museums Journal*, vol.96, no.7, July 1996, London, 1996, p.22
[24] P. Thomas, *Museums Journal*, vol.96, no.7, July 1996, London, 1996, p.27
[25] P. Lewis, "Virtually visited Marbles", *Museums Journal*, August 1998, London, 1998, p.21; and W. Kirby, "Challenging perceptions", *Museums Journal*, December 1998, London, 1998, p.19

FEATURES OTHER THAN EXHIBITIONS

There were several features in these sections directly relevant to a particular disability, visual impairment included. Information is discussed about activity in Europe; the European Cities Within Reach initiative involves the provision of audio description in French, Italian and English in London, and large print, braille and cassette provision in Tokyo and Stockholm.[26] There were also articles on interpretative methods, for example the use of gloves for touching objects,[27] information about a BBC Radio 4 book from the series *In Touch*,[28] and a feature on a Directory of disabled artists, performers, writers, visual and tactile artists.[29] The publication of *Building Sight*,[30] methods of describing art,[31] and a feature on print size and signing are all included.[32] Personal testimonies also feature.[33] alongside reports of actions by organisations (Figure 8).

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[26] "Care and Access", *Museums Journal*,vol.95, no.1, January 1995, London, 1995, p.39
[27] "Access and Disability", *Museums Journal*, vol.90, no.8, August 1990, London, 1990, p.12; "Care and Access", *Museums Journal*,vol.93, no.11, November 1993, London, 1993, p.23; "Access", *Museums Journal*, vol.91, no.8, August 1991, London, 1991, p.11
[28] "Care and Access", *Museums Journal*, vol.93, no.11, November 1993, London, 1993, p.23 (a series previously mentioned in May 1993)
[29] "Care and Access", *Museums Journal*, vol.94, no.11, November 1994, London, 1994, p.42
[30] "Open Doors", *Museums Journal*, vol.95, no.10, October 1995, London, 1995, p.40
[31] "Open Doors", *Museums Journal*, vol.96, no.8, August 1996, London, 1996, p.46
[32] "Access and Disability", *Museums Journal*, vol.91, no.6, June 1991, London, 1991, p.10
[33] Gaela Benn of the Touch and Go group in Essex wrote about being blind and deaf and visiting museums "Care and Access", *Museums Journal*, vol.93, no.2, February 1993, London, 1993, p.39 RNIB developments in literature provision "Care and Access", *Museums Journal*, vol.93, no.9, September 1993, London, 1993, p.47 information from MAGDA on lighting and colour contrast and looks at routes around museums "Care and Access", *Museums Journal*, vol.93, no.12, December 1993, London, 1993, p.37 a feature about an RNIB catalogue concerning training and programme provision.

Figure 7 Exhibitions with specific reference to people with disabilities in *Museums Journal* "Open Doors" section, 1995- 1998

Date	Venue	Exhibition	Narrative
1995			
Apr	Gallery in Sweden	TAKTILT	Plaster casts and paintings in relief
May	(General article)	Dialogue in the dark	Exhibition - Sighted people led by visually impaired people
May	Laing Art Gallery	Unleashed - Images and experience of disability	Art by disabled people
May	Plymouth Dome		Descriptions of Audio commentary usage
1996			
Jan	Wakefield Art Gallery		Access project with visually impaired people
Feb	Normanby Hall Yorkshire		Tape tour for visually impaired people
Mar	Tate Gallery, Liverpool	Listening to Art (Seminar)	Audio describing modern art
May	National Portrait Gallery	Breaking the mould	Exhibition describing handling techniques
1997			
Oct	Forest Arts	Seeing in a different light	Exhibition to appeal to senses other than sight
1998			
Aug	British Museum	The Parthenon	Tactile images

Figure 8 - Issues of the *Museums Journal* containing articles about organisations which work with or on behalf of people with disabilities

Date	Article
May 1991	Living Paintings Trust
	RNIB Leisure Guide
	The ADAPT Trust
	MAGDA
	Centre for Accessible Environments
Sep 1995	RNIB Consultancy Fact sheet
Dec 1995	RNID
	INTACT
	RADAR
Sep 1998	Access Review Nottingham Galleries

Figure 9 - Articles within *Museums Practice* 1996 - 1999 regarding issues of disability

Year	Total sections	References to disability
1996	67	9
1997	67	9
1998	64	8
1999	59	8

MUSEUMS PRACTICE

A survey was also completed, again using the contents page as a reference, with the *Museums Practice*, a journal produced three times a year by the Museums Association, which began as a complement to the *Museums Journal* in 1996. Issues 1 to 12 inclusive, from the years 1996 to 1999, were considered and Figure 9 shows the prevalence of articles with a specific reference to disability. The total number of articles was ascertained similarly to the other journals by counting the number of main articles on the contents page (Figure 9).

Where articles were included that made reference to disability, a variety of topics were covered. Audio guides were covered in four of the issues and this interpretative aid was also included in issue 5, in the Main Theme section, Text. Tactile opportunities were also featured in this journal. There is only one article on the DDA specifically, and some general reports about accessibility. People with disabilities in relation to Health and Safety policies was discussed and the use of computers as interactives and as other forms of interpretation were included. Initiatives such as access advisors groups are discussed. Consultation was also included. Access audits and training were also reported to encourage these issues to be investigated. Text is another interpretive aid considered.

The *Museums Practice* contained in each issue a "Main Theme" on a special subject. Of the twelve issues used for this survey, six specifically concern issues relating to visitors with case studies and practical advice for museum professionals.[34]

[34] The relevant main themes occurred in the following issues: "Display", issue 2; "Outreach", issue 3; "Interpretation", issue 5; "Visitor Services", issue 7; "Audio Visual and Multi Media", issue 9 ; "Outreach as Agent of Social Inclusion", issue 11.

It could be concluded from the table that the features on disabilities in the 1990s are now becoming more regular.

NEW BEACON

The RNIB also produces a monthly journal containing news about a wide range of issues concerning people with sight problems. *New Beacon* aims to be of interest to blind and partially sighted people, as well as sighted people and people who work with people with visual impairments.

New Beacon was surveyed in a similar way to the *Museums Journal* and the *Museums Bulletin* and the results are shown in Figures 10 - 12. which follow. The occurrence of articles with a reference in some way to disability was not surveyed on this occasion because the journal was produced by an organisation with a particular interest in disabilities. Instead, the prevalence of exhibitions with a specific reference to people with disabilities was assessed, along with the number of exhibitions mentioned which took place in Scotland, and the number of exhibitions which included artwork by people with visual impairments.

The results indicate that the *New Beacon* was utilised by the museum community as an outlet to advertise exhibitions which had a particular reference to people with visual impairments. There are more exhibitions mentioned in the *New Beacon* than in the *Museums Journal* and *Museums Bulletin*. Perhaps this indicates the reason for the relative paucity of such exhibitions in the publications produced by the MA: the marketing of exhibitions with a specific reference to people with disabilities was targeted at a publication to which they would have easier access. In terms of attracting visitors, this was probably a wise move by the museums concerned, but in terms of widening the knowledge amongst the museum profession it might have been advisable to include the exhibitions with the museum publications as well.

Figure 10 - Number of exhibitions by artists with visual impairments included in issues of the New Beacon, 1980 - 1999

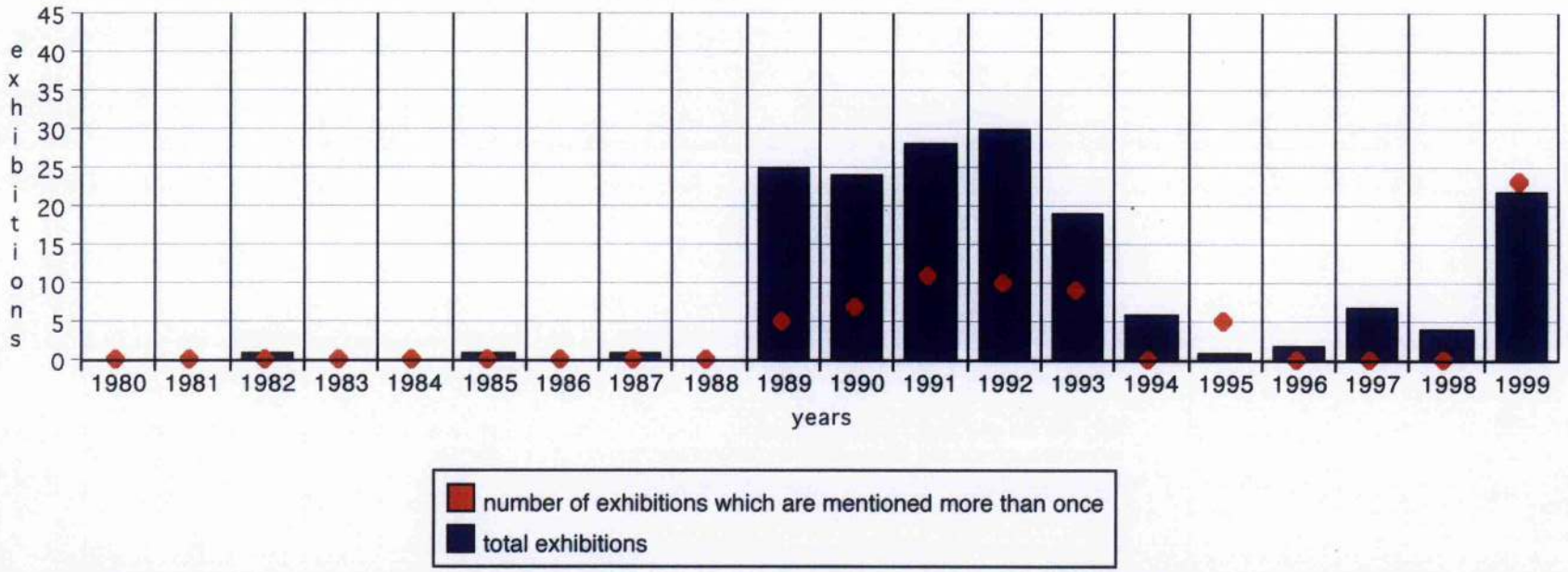


Figure 11 - Number of exhibitions regarding disability included in issues of the New Beacon, 1980 - 1999

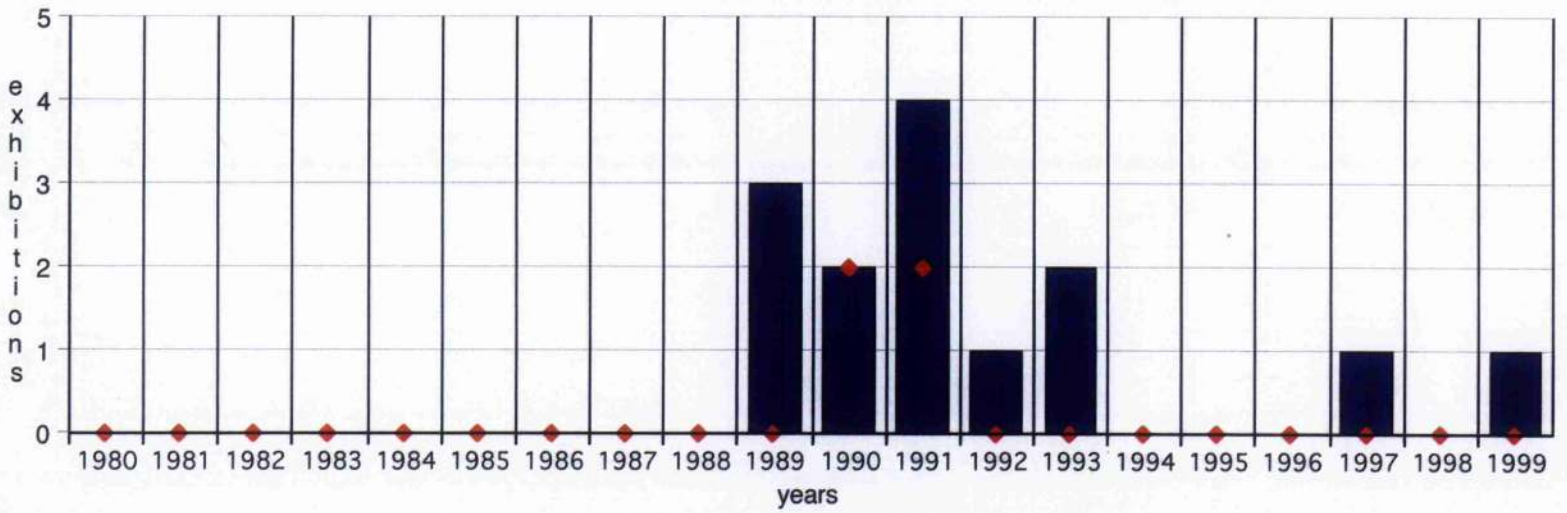
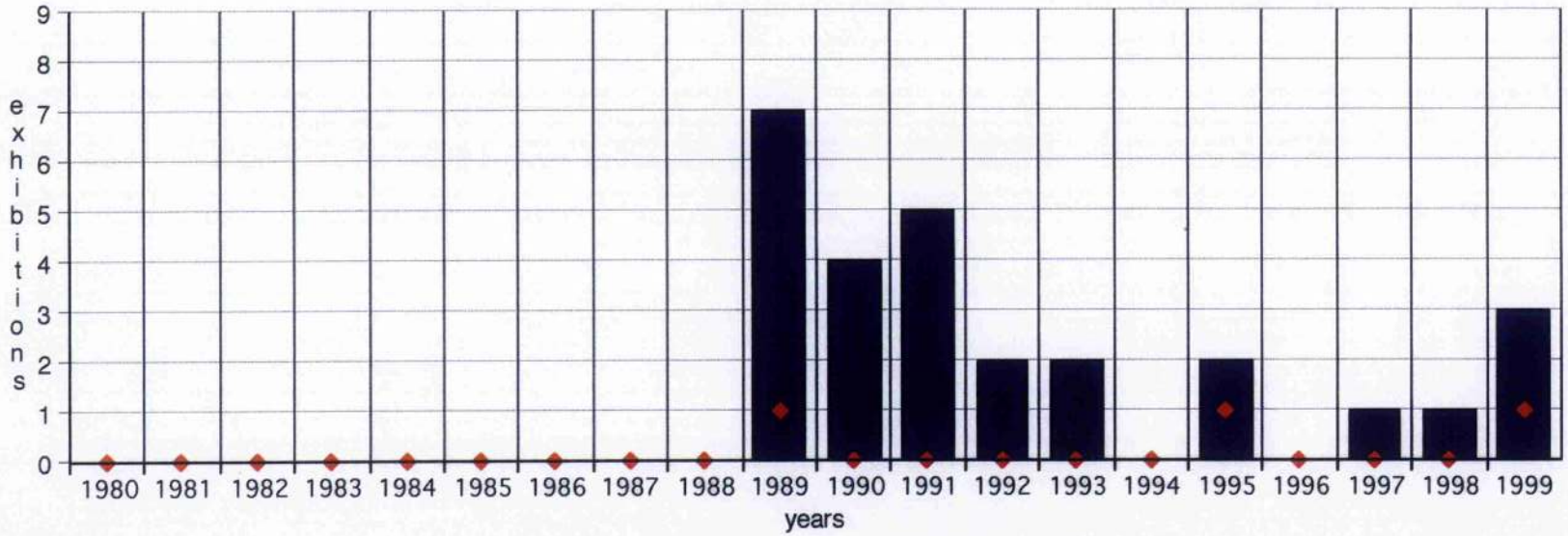


Figure 12 - Number of exhibitions held in Scotland included in issues of the New Beacon, 1980 - 1999



EXHIBITIONS RELATED TO DISABILITY

During the fieldwork undertaken in the course of this research, several exhibitions were visited. Only one permanent exhibition especially designed for people with disabilities came to my notice whilst several temporary ones were held. Some of the temporary exhibitions, *Dialogue in the Dark*, *Blind Alphabet C*, and *Changing Perceptions*, had a specific reference to or contained work by people with impaired vision. Others contained artwork by people with other disabilities, such as an exhibition entitled *I*, and one entitled *Lip Service*. I also became aware of various workshops with exhibitions for people with visual impairments, for example those attached to work by Jake Harvey, Hideo Furuta, Jack Goldstein, and Max Ernst.

For *Dialogue in the Dark* and *Blind Alphabet C*, I accompanied sighted visitors to the exhibitions. After visiting *Changing Perceptions* alone, I interviewed a visually impaired person who had visited it on a previous occasion, and held discussions with the curator concerned with organising the workshops accompanying exhibitions by Jake Harvey, Hideo Furuta, Jack Goldstein, and Max Ernst. I visited *Lip Service* alone and attended a seminar to hear testimonies from the artist and participants in the exhibition entitled *I*, thereby enabling myself to gain a variety of opinions as to the validity of such exhibitions.[35]

[35] The seminar was organised by Napier University and was entitled "Whose Disability?". It took place on 30th October 1999 at Edinburgh Festival Theatre.

DIALOGUE IN THE DARK

Venue: Kelvingrove Museum and Art Gallery, Glasgow
Date: 9th October 1998 - 9th January 1999

This exhibition originated in Germany and was brought to Britain by The Bretherton Consultancy, run by June Bretherton, herself registered blind with no light/dark recognition. The originator of the exhibition, a German doctor, Andreas Heinecke, describes his creation of which

> ...the original concept was as an Art form, giving people the opportunity to use their subdued senses in the dark and to employ (even if voluntarily) visually impaired people to give them work experience.[36]

It was to work on two levels therefore, to provide income for people with disabilities, and to provide a chance for people to appreciate their other four senses. The proposal caused some problems for Britain. It is becoming increasingly difficult to employ unemployed disabled people in paid work for a short time because recognised income from any source affects the amount of their state benefits.

The idea of *Dialogue in the Dark* is that:

> ...by pitching fully sighted people into a dark environment they gain a new awareness of their senses.[37]

But this is not intended to present a true representation of blindness. The supporters of the exhibition wanted a

> ...move to awareness training to ensure that visitors would not imagine that the blackness was exactly like blindness - which it is not.[38]

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[36] Letter from June Bretherton, The Bretherton Consultancy, responsible for bringing *Dialogue in the Dark* to the UK, 27th January 1999
[37] J. Rougvie, "Get in touch with your senses", *The Herald*, Friday 8th January 1999, p.8
[38] Letter from June Bretherton, 27th January 1999

The exhibition worked on a more subtle level than this, allowing an appreciation of how the lack of sight would affect the ability to navigate easily around everyday situations. In some instances, specially designed glasses are offered to effect a visual impairment and so to allow appreciation of the challenges facing people with sight impairments. Both the use of these glasses and the perception that plunging people into darkness provided a true representation of visual impairment were refuted at this conference. The preference was to visit with a visually impaired person or to work from testimonies of people with visual impairments regarding difficulties faced with museum visits, thereby gaining a true perspective rather than a false perception of difficulties encountered.

Dialogue in the Dark was shown at three venues in Britain, two in England[39] and one in Scotland. The exhibition was viewed at its latter venue, Kelvingrove Museum and Art Gallery in Glasgow. This visit coincided with The ADAPT Trust conference for museum workers on 4th December 1998. The conference discussed the exhibition, the issues it raised for people with disabilities and the role museums and galleries could play in their lives. The fact that the conference was held at all indicates the importance of the need to understand disability issues amongst the museums community, and the impetus of disability organisations to accelerate this. It also indicates the importance of disabled people as valued audiences for museums and galleries.

This exhibition was the first encountered where the roles of guide and guided were reversed and sighted people began to experience the difficulties of the visually impaired people when they visited an exhibition. During the tour of the exhibition, ordinary elements of daily life were portrayed: a kitchen, a park and a seat on a bench, crossing a road, ordering a drink in a bar and finding a table. Travelling through the exhibition encouraged the panic of bumping into things because they could not be seen. And, at the same time,

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[39] At the Southbank Centre in London, where it was shown in 1995, it had a purpose built space, so it was only shown in one more museum, the Museum of Science and Industry in Manchester.

there was a heightened awareness of other senses on which you came to rely. A quick bond had to be developed between yourself and fellow exhibition viewers; the "...socially-ingrained discomfort at physical contact with strangers..."[40] , as Janet Rougvie called it, had to be exorcised as you found your way around, and an attempt to acquire the "...skill of touching..."[41] had to be practised. Colleen Batey also focuses on the social aspect of *Dialogue in the Dark*; the exhibition encouraged sighted people and visually impaired people to work together and to assist in breaking down the natural reserve that:

> ...for many people initiating contact with others can be difficult without eye contact, so if they pass a blind person in the street it may be hard to speak.[42]

The exhibition could not hope to give a real appreciation of the lives of people with visual impairments; very few people who are registered blind[43] have absolutely no light/dark recognition. What the exhibition sought to achieve was to provide an insight into how reliant people are on the other four senses when sight is denied. The exhibition also highlighted the trust and dependency and vulnerability of people with visual impairments, and special requirements of marketing, events, timing and situation of the venue for museums to have any potential of expanding their audience. The exhibition is a superb model for instructing on "inclusion" and one which can be adapted to the venue where it is experienced. Unfortunately, no parallel appears to originate in Britain.[44]

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[40] J. Rougvie, "Get in Touch with your Senses", *The Herald*, Friday 8th January 1999, p.8
[41] Ibid., p.8
[42] From personal conversation with Dr Colleen Batey, Keeper of Archaeology at Kelvingrove, and the curator of the presentation *Dialogue in the Dark* at the museum.
[43] See chapter 2
[44] The exhibition has been popular on the Continent and has visited 50 venues. It has been exhibited in a bonded warehouse in Hamburg for 3 years, providing employment for 36 disabled people. In the future, it will travel to Helsinki and will employ 50 visually impaired people, and eventually Milan.

BLIND ALPHABET C

Venue: The Chapman Gallery, University of Salford
Date: 12th October to 13th November 1998

As an exhibition, *Dialogue in the Dark* was interesting because it reversed the roles of the guide and those who are usually guided. This is not the only exhibition of its type to have visited Scotland, unusual though the idea is. Visitors to the exhibition, *Blind Alphabet C*, could not experience it without a visually impaired guide. This was at the behest of Wiliem Boshoff, the South African sculptor of the exhibition of wood carvings, and himself blind. This exhibition represents work by a disabled artist touring mainstream museums outside his own country. The charity Artsense had organised the viewing of the work in the UK. Prior to *Blind Alphabet C*, there had been *Blind Alphabet B* in 1995 at Birmingham Museum and Art Gallery in the Gas Hall gallery. This was part of the "Apartheid v Independence" exhibition of work by twelve South African artists. Megan Hughes, a visually impaired artist, formed Artsense after this exhibition and was the guide for *Blind Alphabet B*.

The wood carvings were displayed in felt-cushioned mesh cases with a metal braille text panel on the lid, and a softer braille panel inside. The sculptures themselves are all carved to represent a word beginning with the letter "C". Each piece was meant to convey its meaning by feel rather than by its visual representation. To complete the task, the words chosen to be represented by the sculptures are not those which occur in everyday usage. The idea is that the pieces are investigated without any reference to text of any kind. The exhibition is not intellectually easy, particularly as the skill of touch is usually less developed in able-bodied people.

I was guided round this exhibition in two venues. The Scottish venue was the Royal Museum in Edinburgh, which chose to take 20 of the

pieces and to stage it in the entrance hall, and the other was the Chapman Gallery, Salford, at which it was the premier exhibition and used 66 of the 77 possible pieces. (Figures 13 - 15) Whilst the visually impaired guides were in charge, there were sighted people around for reasons of security and, during the visit to Salford, they advised visitors as to the nature of the exhibition and also chatted to the guide, allaying nerves on the part of the visitor and the guide on what was probably a very new departure for both parties.

Sighted people were completely dependent on the visually impaired guides to access the exhibition in any way. They cannot enter the gallery area without a guide, there is no printed text available without request, and the only "visible" text is in Braille, (apart from an explanatory panel to inform that the exhibits cannot be touched without a guide). The exhibits are laid out in a grid formation so there is no obvious starting point and the exhibits cannot be seen or touched without being lifted from their cases of metal mesh; otherwise the piece is only visible from the side with a low viewing point. The removal of the exhibits is the sole preserve of visually impaired guides. The special arrangements to view this exhibition are for sighted people, not people with sight impairments which inverts the usual visitor experience.

This situation is similar to that experienced by visually impaired people every time they go to a museum: it is difficult to find the entrance to the galleries without assistance and orientation within a gallery is difficult. There is usually nothing but printed text available, and the only access to other formats of information is by request, which is sometimes met with a negative response, and the exhibits themselves cannot be accessed completely without assistance.

> The visitors are miffed if they have paid to visit an exhibition and they cannot see it - visually impaired people feel like this all the time.[45]

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[45] Annabel Longthorne, curator of the Chapman Gallery, University of Salford, during conversation on 28th October 1998.

Figure 13 - *Blind Alphabet C* exhibition, The Chapman Gallery, Salford

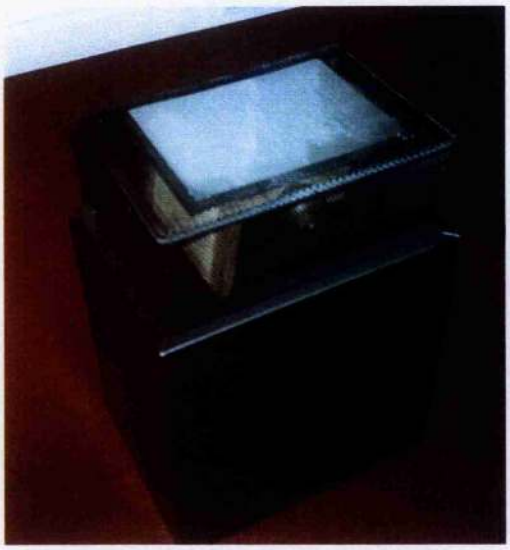

Figure 14 - Example of an exhibit as seen by a sighted visitor without assistance from a visually impaired guide

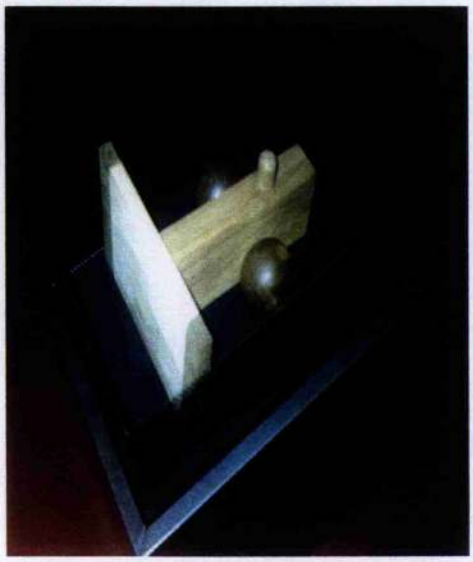

Figure 15 - Example of an exhibit uncovered by a visually impaired guide

CHANGING PERCEPTIONS

Venue: Crawford Arts Centre, St Andrews
Date: 9th February to 10th March 1998

Changing Perceptions is another recent exhibition aimed at being accessible through all the senses, not just sight. This exhibition did not have work by people with disabilities nor was it an investigation of the life of people with disabilities, nor did you need a visually impaired guide, but it showed work by various artists who wanted to appeal to smell, taste, touch or hearing. The exhibition visited three venues in Scotland, the City Art Centre, Edinburgh, in 1997, and the Crawford Arts Centre, St Andrews, in 1998, and the Collins Gallery, Glasgow, also in 1998.[46] A sound guide was provided as an accompaniment at the City Art Centre, a sign that the exhibition was "...specifically targeted at the visually impaired",[47] and ought therefore to be accessible to them. A tape-recorder was also provided to allow spoken comments from visitors.[48]

All the pieces were very different and the artists involved in *Changing Perceptions* had defined ideas about how they wanted their works to be perceived. Clara Ursitti wanted to challenge the "...art historical notion.." of the self-portrait being purely visual in her *Self-Portrait in Scent* piece. Both Diane McLean and Mary Bourne relied on the use of touch. Diane McLean also invoked sound in *Tide*, her piece constructed from aluminium strips suspended from the ceiling. Mary Bourne wanted people to use their fingers to "see" the earth and stones which only feet would normally touch with her representations

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[46] The exhibition also appeared in England at the Towner Art Gallery, Eastbourne, May - July 1998

[47] Letter from Laura Hamilton, Curator, Collins Gallery, 2nd May 2000

[48] Scottish Arts Council Assessment Report, Visual Arts Department, visit dated 10th May 1997, enclosed with a letter from Jane Warrilow, Assistant Keeper Fine Art (Touring Exhibitions), Edinburgh City Art Galleries, 5th June 2000. This was poorly used due to the potential of a lack of anonymity when leaving remarks.

of the different textures of land on the stone sculptures which formed her artwork. Su Grierson appealed to sight in her optical light show, and Stephen Hunter and Simon Fildes encouraged group activity in their pieces to make sounds together. Ashley McCormick also relied on visitors creating sounds in his luggage piece, but Andrea Roe made an important point about how we use a combination of senses to form an answer:

> When starting new work, I am acutely aware of using different senses, initially relying on eyes to select objects, then touching, handling, and often smelling them, in an attempt to respond accurately to the materials.[49]

The curator of the exhibition, Jane Warrilow, Assistant Keeper Fine Art, Edinburgh City (Touring Exhibitions), had a particular aim in staging this exhibition:

> [It is intended] to make an exhibition of contemporary art which would be of interest and accessible to fully, partially and non-sighted visitors and to do this in a way which didn't compromise the quality and ideas of the work.[50]

The exhibition proved popular at its many venues, particularly at the Collins Gallery, where twenty mainstream primary schools and eight special needs groups took part in the education programme. It appears from a book of visitor comments that children and wheelchair users were the least well-provided for: Simon Fildes and Stephen Hunter's sound-sculpture table objects were heavy to lift, the table was too high for wheelchair users and general unaided access, Andrea Roe's *Right Hand Side and Cape* was positioned too high up

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[49] A. Roe as cited in *Changing Perceptions*, exh. cat., City of Edinburgh Council, Edinburgh, 1997. p.12

[50] Correspondence from Jane Warrilow, Assistant Keeper Fine Art (Touring Exhibitions), Edinburgh City Art Galleries, 5th June 2000. The exhibition at the City Art Centre, Edinburgh, was reported on by SAC, Ann Rayner of INTACT and Ruth Singer. Funding was provided by Scottish Gas for rubber matting around the exhibits and guide tape and tactile gallery plans, an Edinburgh organisation completed an audio guide (which did not travel to the Crawford Arts Centre) and VISSES provided staff training at Edinburgh.

for children (an alternative of using standing platforms was deemed too dangerous), and Clara Ursitti's *Self Portrait in Scent* and Ashley McCormick's *Affection* were again too high. The 'fault' here seems to lie with the exhibition designers rather than the exhibition itself and is perhaps a case for increased disability awareness staff training. The most popular pieces for visually impaired people, according to the Collins Gallery, were Mary Bourne's sculptures, particularly as they were on low plinths and could therefore be accessed by children and wheelchair users. Diane Maclean's *Tide* was deemed to have the potential to cause injury as the aluminium could easily be walked into. This piece was not shown at the Crawford Arts Centre but was instead put on the Travelling Gallery as part of the *See Sense* exhibition where it could be suspended close to the wall, rather than across the thoroughfare of the gallery.

Press feedback on the exhibition made as interesting reading as the visitor comments, both on layout of the exhibition and on the pieces involved. Iain Gale commented interestingly on Ashley McCormick's piece on the use of senses:

> This is merely the imagined, the unrealised, the unconsummated. This is the art of consolation, and it is a moving metaphor for a loss of sense - in this case touch - which heightens our awareness of the similar deprivations at the heart of an exhibition which, in part at least, is specifically designed to enable the blind to 'see' art.[51]

Clara Ursitti's *Self Portrait in Scent*, consisted of a tall, thin three-sided partition within which visitors stood. Here, it was intended that they try to experience a scent which was permeating from a black ventilation-type outlet at the top of the middle piece of the partition. Gale was sceptical about the nature of the piece of artwork because it was not "lasting".[52] However, such a piece could create a 'lasting impression', both on those who require art with an appeal

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[51] I. Gale, "Stimulus for the Forgotten Senses", *Scotland on Sunday*, 4th October 1998, p.25
[52] Ibid., p.25

to senses other than sight to gain the easiest and best appreciation of objects, and to those who can perhaps still make effective use of their sight, but are interested in different types and interpretations of art. By the end of his article, Gale seems to have changed his interpretation of what 'art' is, perhaps proving that exhibitions such as *Changing Perceptions* stimulate debate to encourage social inclusion:

> What I do believe though is that art need not be purely 'visual'. What this show proves is that art can be experienced both aurally and in a tactile sense, in a way which can actually surpass the visual and which can not only enrich the lives of the visually impaired, but which can bring to us all a sobering awareness of our own impossible fragile physicality.[53]

The List magazine, 4th - 17th April 1997, gave the exhibition 4 stars but did wonder if, despite being a "...good move...", the "...'exhibition aesthetic' still rules..." and if "...the layout of exhibits is the most apt for partially-sighted or blind visitors."[54] This may have been a comment on the display of *Tide* as mentioned above. The SAC itself also expressed reservations regarding the layout as

> ...practical but as a sighted visitor I found the proliferation of labels, floor coverings etc in the already complex fairly low ceilinged space rather cluttered and detracting from the work - but I appreciate a compromise was needed to fit the special nature of the show.[55]

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[53] I. Gale, "Stimulus for the Forgotten Senses", *Scotland on Sunday*, 4th October 1998, p.25
[54] S. Beaumont, "Changing Perceptions", *The List*, 4th - 17th April 1997, p.85
[55] From Scottish Arts Council Assessment Report, Visual Arts Department, visit dated 10th May 1997, p.3; enclosed with correspondence from Jane Warrilow, Assistant Keeper Fine Art (Touring Exhibitions), Edinburgh City Art Galleries, 5th June 2000

Comments in the Visitors Book at the City Arts Centre show all types of opinions stimulated by the work:-

'...This is the first time I have ever experienced an exhibition without my glasses. It was fab! '

'...I had forgotten my glasses and found the information boards very small...one small poster at reception...surely visually impaired people need more information where the exhibition is, not less.'

'...For once we are allowed to touch the sculptures in an exhibition.'

'...'Please do not touch' signs drive me mad! So thank you. I had a good play around. My hands enjoyed themselves, they do get rather bored stuck in my pockets at most other exhibitions!'
'...Enjoyed exhibition, would have liked "Moon" facilities rather than braille...'

'...I like the braille. I would like to ask someone who is blind how they found the exhibition. I don't feel that my perceptions were changed but there were some nice ideas...'

'...Enjoyed exhibition, but would have liked more encouragement to touch the exhibits. I felt fairly inhibited after years of not being able to touch things in art galleries...'

'...an endurance test for the blind? Very disappointed...'

'...Fantastic. As a sighted person it is wonderful to have an exhib. which involves so much more than sight...'

'...Something for everyone nice to see people with disabilities involved for a change...'

Such comments indicated the variety of opinions evoked by an exhibition which encourages exploration and the use of senses other than sight. The comments come from both sighted and visually impaired people. Some of the comments also indicate the paucity of opportunities to touch objects in museums. The problems associated with this are discussed in Chapter 10 but it does illustrate one of the difficulties museums face in trying to introduce new audiences into their galleries, particularly those who need to interpret objects with senses other than sight.

Senses other than sight were employed in the perception of the printed literature to accompany the exhibition. Brailled copies of the catalogue were displayed within the gallery, inclined on book stands but the height of the stands meant that whilst the Braille was being read, the wrists of the readers were held at a painful height. The cover also appealed to the sense of touch in that it was made from corrugated plastic. There was also a large print copy of the catalogue available in the gallery, using black text on a white background to present good contrast.[56]

The visitor comments, press attention, and attendance numbers demonstrate the validity of an exhibition such as *Changing Perceptions*. It stimulated debate on all kinds of levels about visually impaired people and their ability to interpret 'art', and museum attitudes towards and presentation of exhibitions with a specific reference to visually impaired people. On this latter point, it is perhaps interesting that the Collins Gallery staff felt an exhibition from six years previously was better researched and they would always recommend this, *BP re - Vision,* toured by the Greenwich Citizens Gallery, London, above *Changing Perceptions*, as

> ...a model for sensitive and effective access and interpretation of contemporary art for people with visual impairment.[57]

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[56] Issues of text and colour contrast are discussed in chapter 9
[57] Letter with Laura Hamilton, Curator, Collins Gallery, 2nd May 2000

This show contained multi-sensory artworks by nine contemporary artists who had direct experience in working with people with learning difficulties. This would possibly be the first exhibition experience many people with learning difficulties who visited the Collins Gallery would have had and it was hoped would encourage them to visit again.

An extension of *Changing Perceptions* was *See Sense*, an exhibition organised by the City Art Centre for the Travelling Gallery, City of Edinburgh, using works by the same artists. The Travelling Gallery first came into being at the behest of the SAC in the 1970s, and has been run by the museum and galleries division of the City of Edinburgh Council since April 1997. It aimed to be a

> ...natural service of varied and stimulating exhibitions supported by an enhanced education programme.[58]

This exhibition by its transitory nature was more accessible to people and travelled around Scotland from September to December 1998 (Stirling, Fife, Perth and Kinross, Paisley, North Lanarkshire, Skye and Lochalsh, Lochaber, and Moray.)

EXHIBITION ENTITLED '*I*'

Venue: Portfolio Gallery, Edinburgh
Date: 22nd October to 20th November 1999

Work involving disabled people can arouse many emotions, pity, sympathy, enjoyment, pride, disgust... The exhibition '*I*' by Alexa Wright was shown at the Portfolio Gallery, Edinburgh in 1999. This work which manipulated photography of her own body and elements of other people's physical disabilities, followed on from work in 1997, funded by the Wellcome Trust, to

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[58] *See Sense*, exh. cat., City of Edinburgh Council, Edinburgh, 1998, p.2

investigate the phenomenon of "phantom limbs", the feeling that the amputated limb is still part of the torso. This resulted in meeting various people who had had amputations and taking photographs of them and adding in their "phantoms". The later work involved further negotiation with people with disabilities to have their disability photographed and applied to a photograph of the artist. The aim of this work was to encourage people to examine attitudes towards people with disabilities. The artist's head was used on all except one of the eight photographs; on the other her body was used in its entirety. Varying degrees of manipulation were used: for example, on one image, the only part of the disabled person's body used was the shoulder. The photographs were taken in the opulent surroundings of Hospitalfield House to present the 'real' images in a 'real' background, and to prevent a clinical white or false background, detracting from the message.

One of the people involved in the project makes apt comment on disability in art:

> ...people don't question why statues have missing limbs or missing heads, they are still considered to be amazing works of art....I think it is fantastic to acknowledge people's differences, but in a positive way.[59]

A seminar held at the Festival Theatre, Edinburgh, provided stimulating debate on the issues surrounding the representation of people with disabilities in art, and the reception given to a person with no disability being responsible for the art.[60] 'I' was due to tour to the Ffotogallery in Cardiff, Wales, but the reaction to images of people without disabilities taking on the disabilities of others prevented this. Arts Disability Wales, which represents the interests of disabled people in relation to the arts in Wales, opposed the display which "...showed disabled people in a very poor light..." and they felt that the people portrayed were being exploited, because an able-bodied artist had raised a

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[59] C. Long, as cited in *I*, exh. cat, Portfolio Gallery, Edinburgh,1999, p.3

[60] The seminar was organised by Napier University and was entitled "Whose Disability?". It took place on 30th October 1999 at Edinburgh Festival Theatre.

"...question of ownership..." and had imposed too much of her own meaning.[61] Ffotogallery has a strong record of outreach work with disabled people but the local groups also held the above reservations and, alongside this, felt it inappropriate to show an exhibition involving people with disabilities in an inaccessible venue. The exhibition wasn't staged, despite the fact that the curators

> ...felt that the work carried a very positive message, raised very important issues sensitively, and could be the starting point for some very useful debate and consciousness raising...[62]

Ffotogallery tried to impress that

> ...the subject matter of visual art work, offensive or not, could not be controlled and there was an important issue of freedom of expression/censorship at stake.[63]

An alternative venue to host the exhibition has yet to be found; the Arts Disability Wales agreed for it to be shown along with a seminar with speakers from all interested parties to debate the work. The exhibition created an emotive response on two sides, from the hostility to the presentation of art by an able-bodied person and featuring an able-bodied person with disabilities "superimposed" onto her body, and those who wanted the photography shown to illustrate the importance of including disability in mainstream work. The opposing arguments indicate the depth of feeling which disability arouses within the artworld and the difficult path which museums have to tread when mounting exhibitions involving disabilities..

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[61] Letter from Lisa Edgar, Education Development Officer, Ffotogallery, Cardiff, 5th May 2000
[62] Ibid.
[63] Ibid.

LIP SERVICE

Venue: Talbot Rice Gallery, Edinburgh
Date: 15th June - 20th August 2000

An exhibition focusing on work by people with disabilities was *Lip Service*, organised by Artlink Central and touring three Scottish venues in 2000, the Smith Art Gallery and Museum, Stirling, the Talbot Rice Art Gallery, University of Edinburgh, and Project Ability, Glasgow. Seven groups were involved, working in a variety of media, photography and video (Margaret Blackwood Housing Association, Stirling), Poetry and Papermaking (Dash group, Alloa, and Day Unit, Clackmannan County Hospital), Projection/Installation (Kerse Road Day Centre, Stirling), Computer Generated Animated Images (Kildean Day Hospital, Stirling), texture and video (Oswald Avenue Resource Centre, Grangemouth), Kinetic sculpture (Stirling Stroke Club), sensory work (Whins Day Centre, Alloa). The groups involved worked with artist leaders, Anne-Louise Kieran, Jo Arksey, Ali MacDonald, Elspeth Garbut and Andrew Paterson, Tracey McConnell-Wood, Anna Cocciadiferro, Charmain Pollock respectively. The project

> ...was set up to consider the role of disabled people in society as we move into a new millennium and whether their status has improved.[64]

The exhibition was

> ...conceived as a millennial look at disability issues, in particular whether legislative changes at the end of the twentieth century has made a real difference to people with disabilities and special needs...[65]

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[64] Tessa Jackson, as cited in *Lip Service* , exh. cat, Artlink Central, 2000, p.1
[65] Letter from Maria Devaney, Smith Art Gallery and Museum, Stirling, 5th May 2000

The title came from the idea that we are only paying lip service to equality and not actually doing anything about it. But do exhibitions like this work? The pieces themselves used all senses to experience them, particularly the sensory work, a pentagon inside which each sense is clearly explained, although there was not much space for more than one person. The brochure was the only interpretative feature and the grey text on grey background presented a poor contrast and the text was small. The Talbot Rice Art Gallery displayed all bar one piece upstairs, but there was a lift, space around pieces and stairs with nosings, handrails and fillers.

This project succeeds *7 x 7*, a project using largely the same groups in 1996, by Artlink Central in collaboration with Central Regional Council's Heritage and Cultural Services and the SAC's Craft Committee. This was displayed at the Smith to raise the profile of arts activities for people with learning difficulties.

WORKSHOPS

It need not be an exhibition which is in some way meant to appeal in itself to visually impaired people, but exhibitions can have workshops attached to them to show how visual art can appeal to people with limited sight. The Fruitmarket Gallery and Talbot Rice Gallery have held such workshops in conjunction with the Royal Blind School in Edinburgh and groups alerted by RNIB tapes.[66] The Royal Blind School has an art department and in the 1980s, Aidan Bremner, the Head of Art, organised some imaginative workshops at the Fruitmarket Gallery in conjunction with Pat Fisher, formerly from the Fruitmarket and now Assistant Curator at the Talbot Rice Gallery. Jack Goldstein, a Canadian painter of six-foot-square colourful paintings of astronomical phenomena, held a series of workshops for children with very limited sight from

[66] From correspondence with Pat Fisher, Assistant Curator, Talbot Rice Art Gallery, 20th September 1998

the Royal Blind School, with the help of Aidan Bremner. A pot of paint was suspended from the ceiling and spun round to create a Jackson Pollock-style work, allowing participation and creativity. In the late 1980s, the Texas-based foundation which controls Max Ernst's work, allowed some of his pieces to be handled, albeit with gloves, but at least famous, precious art was being made accessible itself, rather than replicas.

At the Talbot Rice Gallery, Jake Harvey's sculptures were used in touch tours in 1993 by community groups and the Royal Blind School. The sculptures were mainly wood and metal and so accessible to touch, or to play![67] In 1998, Hideo Furuta's work, made at Creetown Quarry in the Borders from steel, granite and plaster, was used for various children's workshops, including the Royal Blind School. Again, music was used[68] and the Scottish Ballet ran workshops, financed by a Lottery Grant, involving dance, passing the stones to each other and using the artworks in a manner not usually associated with an exhibition. This stimulated a discussion and an understanding as to how the art was made and encouraged art to be used for fun and enjoyment.

COMING TO OUR SENSES

Venue: McManus Galleries, Dundee
Date: 20th April to 26th June 2001,

"Coming To Our Senses" was organised by Craft Space Touring, based in Birmingham. It comprised work by several artists designed to appeal to all five senses, with additional methods of interpretation for people with visual impairments, for example Braille and sound. It was possible to touch everything within the exhibition and a selection of the exhibits are illustrated in Figure 16. Some of the pieces involved required the use of more than one

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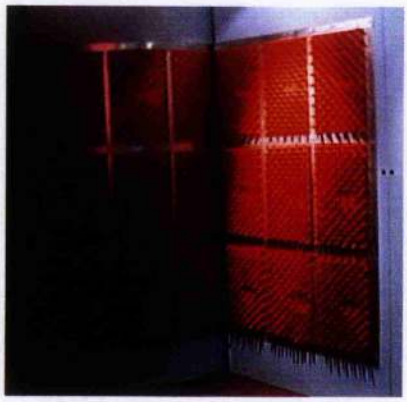
[67] Aidan Bremner got the children to play the sculptures.
[68] Hideo Furuta was a percussionist also.

sense to gain a full appreciation of the piece, for example the spheres in Figure 16 (c). These were made from various fabrics including holographic and heat-sensitive fabrics, feathers, PVC, rubber, and velvet. The sense of sight was required to appreciate the holographic images particularly, but the sense of touch informed of the different types of fabrics used as well, and even sound could be used to appreciate these objects as they could be gathered together.

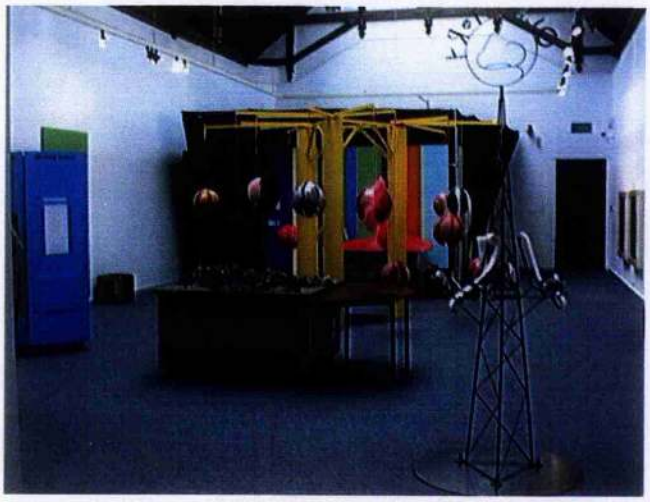
Braille was provided to assist interpretation of the exhibition to visually impaired people who could read it. The Braille was written on either plastic or metal and each label was attached vertically to the wall or backing board next to the relevant object. The labels were short but the vertical positioning would be more difficult to read than the labels for "Changing Perceptions" which were displayed on a more comfortable slant, albeit that these were not ideal. Braille was also introduced as part of the exhibit by Kei Ito. One of the three dresses, made from a combination of PVC, leather, wool and fabric, had Braille incorporated into the edges of the material (Figure 16 (e)).

Touch was encouraged throughout this exhibition and illustrated the importance of this sense in furthering the understanding of objects when they can be touched, and also the elements of understanding an object which are denied when other senses must be used to appreciate an object. Touch will be discussed in more detail in chapter 10, but this exhibition illustrated some of the points which the volunteers used in the fieldwork highlighted during the visits, including that touch is important for all museum visitors wherever possible.



(a)

(b)



(c)

(d)

(e)

Figure 16 (a)-(e) Selection of exhibits from *Coming to Our Senses* at The McManus Galleries, Dundee

PROJECT ZULU

Venue: Scottish Fisheries Museum
Date: July 2000, permanent gallery

In 2000, the Scottish Fisheries Museum in Anstruther, Fife, opened a new gallery devoted to the presentation of a Zulu type of boat, the *Research*, LK62. The boat is being restored and the gallery tells the story of the development of the Zulu type of boat. (Figures 17 - 19)

The *Research* is displayed as if moored in a harbour and visitors move around from the introductory area along ramps to the "viewing area" opposite the boat, and up to a small exhibition area where a model of the boat's cabin has been made, alongside models of other boats and parts of the boat's engine

This new gallery has taken into account the DDA Part III in the design of its interpretative literature and height of displays. The entrance area introduces the display by means of a short video. The video can be seen from a seated area which is reached by descending a short staircase, or from a platform which is on the same level as the entrance to the gallery area. The new gallery follows the principles of the rest of the museum in providing access to all areas by means of ramps, and a short ramp leads down from the video area to the introductory section, comprising several text panels, photographs, a display case and two touch models. The label matrices are pale blue and are affixed to a darker blue backing board; this makes good use of colour contrast using two tones of the same colour. All the labels within the gallery are left-justified in black, sans serif text in a suitably large font for people with visual impairments. The labels and information panels also make use of another skill which can help visitors with visual impairments gain access to essential information. A "size hierarchy" is applied to the text, with extra large print used for the title of each

label or panel, a slightly smaller text used for the first paragraph which contains the key points, and the final section completed in a smaller text again, although this would still qualify as large print.[69]

An introductory area, and the corridor leading on to the next stage of the gallery, are lit by fluorescent lights and these did not cause intense reflection in the display case. The two models provided for handling, however, were not lit very well, and there were no instructions to tell visitors that these could be touched. The curator explained that, at the time of our visit, there were still some final additions to be made to the gallery. The models had raised hulls which could be touched to feel the distinct shapes of the different designs. There was also a bronze disc at the side of each model presenting a line drawing of the outline of the boat. The curator explained that these were to be used for brass rubbings so that visitors could create an image of each boat to take away. The hulls are different colours, one red and one green, which would help to differentiate one from the other.

Colour contrast is used in the gallery with the walls using blue, yellow or cream, and the floor painted terracotta in some areas as opposed to natural wood in the area around the Zulu itself. The yellow and blue particularly are bright and so assist visibility along the corridors where there is no natural light. The colours were deliberately chosen to represent the boat (terracotta) and the sea (blue); as visitors move from the introductory area to the display of the boat itself the blue walls are exchanged for cream to delineate a move to a different area. The cream is still a good contrast with the terracotta floor and the wooden floor of the exhibition area.

Around the area where the boat itself is displayed, white rails are used to prevent visitors falling down to the base of the boat. These are a good contrast with the brown of the boat in the distance and with the brown of the

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[69] See chapter 9 for further discussion of large print.

wooden floor. Text panels are affixed to these rails at an angle to make them visible to people seated or standing. The rails continue up into the exhibition area. The ramps are also bordered on both sides by either two walls or a wall and a handrail to assist mobility for those who might need support. The white rail is used around the engine which is displayed in the exhibition area, providing a contrast with the exhibit. The cases in the exhibition area do not have edges around the glass so the definition is poor and visitors could walk into them.

The entrance ramp of the exhibition area has bronze plaques along it with dates of events during the life of the *Research*'s life engraved on them. The lighting unfortunately causes dazzling on these plaques so that they are difficult to read for all visitors, and can also hinder mobility for those with restricted vision, filling some of the field of vision with a dazzling light.

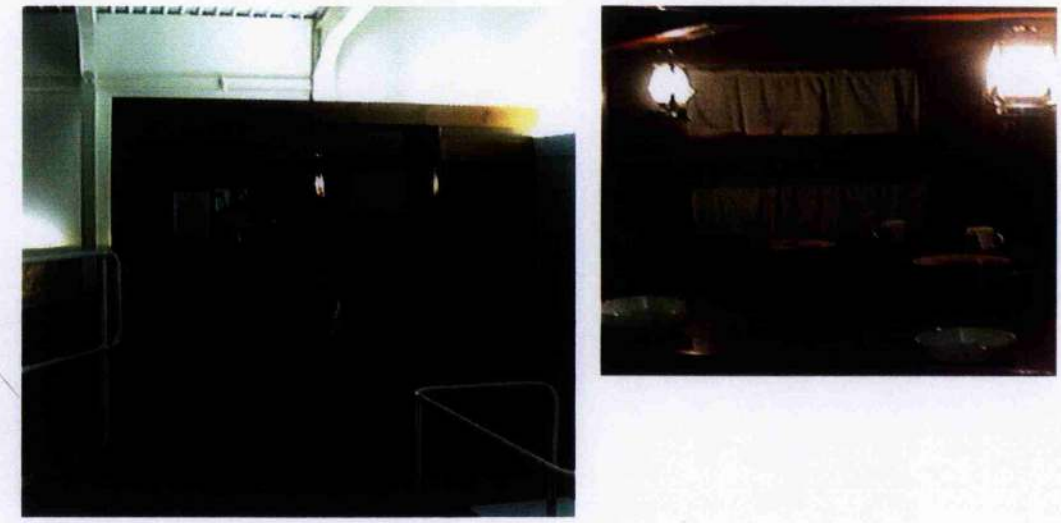

Figure 17 - Exterior and interior view of the cabin exhibit in the *Project Zulu* gallery, Scottish Fisheries Museum, Anstruther

Figure 18 - Entrance area of the *Project Zulu* gallery, Scottish Fisheries Museum, Anstruther

Figure 19 - Viewing deck area in the *Project Zulu* gallery, Scottish Fisheries Museum, Anstruther

CONCLUSION

The surveys of the *Museums Journal*, *Museums Bulletin*, *Museums Practice* and *New Beacon* indicated that there was a steady growth of awareness of people with disabilities entering into the museum community in the 1990s. This can be interpreted from the consistent representation of articles concerning disability in the *Museums Practice* and the increase in articles in the *Museums Journal*. (see Figures 4 and 9)

The *Museums Journal* continued its column specifically for disability issues until November 1998 after which anything relating to disability was integrated into the main article section. This could be seen as a sign of acceptance that disability issues should be seen as a regular point of museum debate, but there was another possible explanation proffered in an earlier edition of the periodical:

> This column has been running for over a year and we would like readers' views on its future. Sadly we receive little information from museums or individuals on the work that is going on. We believe that the column could serve as a useful means of communicating examples of good practice. Please send us short reviews of exhibitions, displays and events as well as information on training, new policies and practices being developed by your museum, helpful publications and organisations, and forthcoming activities.[70]

Of the exhibitions which were encountered during the fieldwork, only *Dialogue in the Dark* was discussed in the *Museums Journal*. These exhibitions were therefore not marketed within the national museums publication. The *New Beacon*, in marked contrast, included several exhibitions,

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[70] C. Keen and E. Hess (ed), "Care and Access", *Museums Journal*, vol.93, no.9, September 1993, London, 1993, p.47

several of which were in Scotland. This publication would have reached those people who might have visited these exhibitions and who had visual impairments. It was perhaps a more sensible idea for museums to advertise these types of exhibitions in this publication as it would reach the audience it desired. However, use of the *Museums Journal* would have popularised the exhibitions amongst those who might have been inspired to include the exhibition amongst the touring exhibition programme, or to create their own.

The *Museums Journal* and the *Museums Bulletin* do indicate, however, that disability issues in general are important to the museum profession, with the inclusion of articles covering a range of issues relevant to people with disabilities. Alongside exhibitions, a variety of issues were included, ranging from types of interpretative aids which can be used in exhibitions, to issues of etiquette, to legislation.[71] The *New Beacon* indicates that people with visual impairments are interested in visiting museums by the number of exhibitions included in the publications during the 1980s and 1990s. There is a notable increase during the 1990s which could be linked to the prevalent mood of social inclusion and the desire by museums to encourage an audience of people with visual impairments. The DDA could also be seen as a motivating factor in as much as it would encourage museums to look towards increasing their audience of people with disabilities.

After the end of the regular column, disability issues still featured in the *Museums Journal* in 1999. The majority of these mentions concern the development and the implementation of the DDA indicating an appreciation of the legislation and the changes it might mean for museums.

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[71] The latter points are included in chapter 3

Figure 20 - Issues of the *Museums Journal* in 1999 containing articles referring to disability

Date	Article topics
1999	
Jan	Data and access policies
Feb	DDA (and cover image)
Apr	Audience development
May	3 articles on social inclusion
June	Castle Museum, Nottingham - social exclusion
Jul	Feature on social inclusion
Aug	Social exclusion and architecture
Sep	Feature on exhibitions and social exclusion
Oct	Launch of MA ethical guidelines
Nov	MA Conference - Access papers
Dec	DCMS Social inclusion action plan

It is perhaps worth briefly considering the development of the representation of the DDA within the *Museums Journal* and the *New Beacon,* as the two major journals included here, during the initial couple of years after the enactment of Part III of the legislation. The *New Beacon* maintains the inclusion of museum related topics during the years 2000 and 2001. In the latter year particularly, museums begin to arrive in the mainstream of the articles within the publication. The issue published in January 2001 included an article regarding improvements to access to museums, and the issues from March, July/August and December all included museum exhibitions within their noticeboard pages, highlighting general exhibitions in Leeds, Tyneside and London.

The *Museums Journal* continues its trend towards the representation of the DDA, but with a greater focus on the reaction to it, the role of museums within social inclusion, and the policy guidelines which have been developed to assist organisations such as museums with the development of the legislation and the growing need to address the role of the museum within the community. There are no leading articles concerned with the DDA specifically but the issue published in June 2000 contained a report indicating that the DCMS policy, discussed in chapter 3, has received a luke-warm reaction to its exhortation to plan to advance social inclusion within museums, libraries and archives.[72] The possibilities of the roles museums could play in the promotion of social inclusion are further emphasised in the December 2000 issue, but the difficulties to move ahead and make improvements in this area are highlighted.[73]

Once improvements are seen to be beginning to come to fruition then the adverse comments and indeed to some extent the feeling of exclusion of the visually impaired visitors from museums will begin to be countered. The

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[72] J. Morris, "DCMS launches inclusion policy for museums", *Museums Journal*, vol.100, no.6, June 2000, London, 2000, p.13

[73] J. Nightingale, "'Vicious circle' holds back social inclusion", *Museums Journal*, vol.100, no.12, December 2000, London, 2000, p.6

foregoing publications discussed are beginning to publicise the special requirements of visitors with disabilities and also discuss possible responses by museums. During the course of this research, some temporary exhibitions with an emphasis on disabilities were sourced from literature, but only one permanent exhibition was found. It is hoped that as museums begin to publicise these possibilities will arise to encourage both debate and understanding within the museum community for greater participation by people with disabilities.

Chapter 5

INTRODUCTION TO FIELDWORK

The aim of the fieldwork section of this research was to discover what a visit to a museum was like for a visually impaired person and to consider the improvements which might be appropriate to make the experience of a visit more enjoyable. As discussed in chapter 1, museums can play a part in advocating the inclusion of people with disabilities, and in particular those with visual impairments, and this fieldwork aims to show the types of provisions which can be made to begin to facilitate this.

It was important to determine the method of conducting the visits to the museums at the initial stage of the research to ensure the most successful outcome possible. It may be worthwhile to reiterate briefly the methodology used to conduct the fieldwork. Due to considerations of time, volunteer co-operation, and venues, it was decided to conduct a semi-structured approach to the fieldwork.[1] Such an interviewing style allowed for informality and focused on more general topics rather than a structured approach with fixed individual questions.

The questionnaire used for the research conducted for the Museums Diploma, and contained here within Appendix C, was devised to provide succinct questions which could be easily answered.[2] This questionnaire was used as a starting point for the topics to be covered in this research but the nature of the questioning was altered to accommodate the opinions of visitors rather than museum professionals. Rather than have short and succinct questions, broader topics were chosen to enable the visitors to have the

[1] See chapter 1, for more detail on this choice of interviewing technique.
[2] This research is referred to in chapter 1

freedom to elaborate on each topic as they chose, to indicate their relative importance in a museum visit. A structure to the information was maintained by focusing on the same topics for every visit, namely physical and sensory access to the museum itself, concentrating particularly on issues of colour contrast and provision of aids to entry and navigation around the building, the design of exhibitions in general, the use of text within museums, an assessment of auxiliary aids offered to assist the appreciation of a museum visit, and museum marketing techniques.

The idea was not to constrain the volunteers to yes and no answers, or indeed to constrain them at all, but to allow them to describe their visit as they wished. The topics listed were relevant to the introduction of Part III of the DDA which fulfilled the intent to assess the effectiveness of this stage of the legislation. The division of the fieldwork into chapters entitled "Architecture", "Colour", "Light", "Text", "Touch", "Sound", and "Guides", illustrates the importance of these particular elements to the volunteers based upon the topics presented to them in the discussions. The contents of the "Architecture" chapter do not discuss the necessity to make major structural changes to buildings, as might be required after the introduction of the final stage of the DDA as this area of the legislation was not the focus of the research, nor are measurements of the buildings included in great detail for a similar reason.

Each chapter follows the same structure, beginning with a discussion of the theory of the relevant issues, and also represents the main advice available for museums. This is followed by a presentation of the results of the visits completed with volunteers.[3] It is important to note the use of tenses throughout the presentation of the research. The visits are presented with the use of the past tense but where reference is made to the situation in the museums as they remain today, the present tense is utilised. The information is then organised under headings of the major features relevant to the chapter

[3] Chapter 1 details the time period during which this research was conducted. Accurate dates for visits with the volunteers are included within Appendix B.

topic. Examples of good and bad practice, as far as can be ascertained from the visits made, are highlighted under these subheadings as the most relevant museum experiences. Each chapter contains illustrations to assist with the representation of comments made within the text, and finishes with a concise conclusion.

Every museum does not appear in each chapter; in some instances results were very similar for several visits and to present every response would be repetitive and the point could become obscured. The nature of this discussion-based research made responses in tabulation form impractical, and it was felt more profitable to use the style of presentation represented in the subsequent chapters, and endeavour to highlight examples of 'good practice' and 'bad practice'. Some museums are mentioned very rarely throughout the research, for example Inverness Museum and Art Gallery, Gracefield Arts Centre, Dumfries, and Smith Art Gallery and Museum in Stirling. This is in part because of the repetitive nature of using all the responses in this style of research, and also because of the lack of attracting visually impaired people who were prepared to assist with the research in these areas. It was decided to retain these museums in the list of those which were considered during the course of this research, but to concentrate on the regions which were able or willing to provide volunteers.

This latter point is of significance to museums in general. The difficulty in attracting volunteers for this research illustrates the difficulties museums might have in trying to address issues of access for people with visual impairments by consultation with appropriate visitors. The information such audiences could provide is not immediately available to museums and would need to be sought, which would require a commitment of staff-time and potentially some funding from the institution. The small number of museums which could be used for this research should not necessarily be seen as a deficiency but provides for more in-depth analysis of some of the institutions.

The method of selection for the volunteers who assisted with this research is described in chapter 1. The initial and pervading aim has been to investigate provisions within museums from the visitor's perspective. In this manner, the research presentation and emphasis is very much driven by the volunteers who assisted the study. The volunteers visited museums local to them, and as they were assisting with the research in their own time and the discussions were potentially to be of a sensitive nature, it was decided to allow some freedom of choice amongst the museums visited, provided the principles of using a breadth of institutions was not affected.

When a large institution was visited, one gallery within it was selected for a more concentrated analysis as this was considered most appropriate for the volunteer. In these instances, there was still an attempt to maintain a variety of types of galleries to present as broad a spectrum of museums and individual exhibition displays contained within them as possible. The names of the volunteers, the nature of their visual impairments and the dates of the visits are included in Appendix B. Throughout the body of the thesis "the volunteer" is used to indicate a point made by the person assisting with that particular visit, rather than by name. This is in part to assist the flow of the text and also to protect some volunteers who would not wish comments being personalised particularly to them.

Due to several factors, some visits were not completed with a visually impaired volunteer.[4] The maximum number of volunteers willing to assist the research was fully utilised, however this was still insufficient to complete accompanied visits to every museum. Where visits were completed without a volunteer, the principles outlined by volunteers on previous visits were applied in assessment of the museum, or the gallery within a museum.

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[4] See chapter 1 for details of volunteers chosen for each region included in this research

The use of people with visual impairments was vital to the desired presentation of this research and it was important to ensure that the views of the researcher were not imposed on the volunteers, and, in visits which were conducted alone, that the visit was undertaken informed by previous difficulties encountered when accompanied by a volunteer.

Chapter 6

ARCHITECTURE

Museums have undergone transitions since their beginnings in the 'cabinets of curiosities'. From a setting where people could wonder at the collections of the wealthy, museums developed with the aim to educate those who visited. Collections were organised and labelled. Vision was considered essential to the appreciation of the exhibition. The eye was to be led and informed by the object and the label. This begins the process of the museum encompassing an educational role and opening its doors to a greater diversity of people.[1] The nature and design of museum exhibits developed, and in the late nineteenth century attention began to be paid to the exterior setting of the objects, with an insistence on seats, pale calm colours in the decoration of the rooms, and clear labelling so that information could be easily assimilated. Socially inclusive practices were already underway at that stage though perhaps with different motivational factors.[2]

The recent development from these early considerations to facilitate and encourage visits to the earliest museums is the adoption of the principles of Universal Design. This aims to tackle the issue of social exclusion in as much as the building itself might be a barrier to participating in the cultural heritage a museum has to offer.[3] It also recognises the social model of disability in that it is the design of the building which can prevent someone from participating, not the fact that they have a disability in itself. To construct a building of Universal Design involves taking into consideration as many people

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[1] T. Bennett, "Pedagogic Objects, Clean Eyes, and Popular Instruction: On Sensory Regimes and Museum Didactics", *Configurations* vol. 6, p.358

[2] Ibid., p.362 See also S. Tait, *Palaces of Discovery - The Changing World of Britain's Museums*, London, 1989, p.1

[3] See chapter 1 for further discussions of these issues.

as possible with different needs, able-bodied people and people with all kinds of disabilities, and endeavouring to devise a plan to enable easier access to museum buildings and exhibitions for a greater potential audience. Universal design does not just relate to the exterior construction of a building but also the interior design of the exhibition space.[4] Museum buildings have various components including entrance doors with preceding steps or ramp, spaces for information areas and exhibitions, and methods of lateral and vertical circulation. It is important to remember that people with disabilities are not only those who use wheelchairs but those with sensory impairments, which includes people with visual impairments and the more subtle changes which might be appropriate for them should be enacted - change does not have to mean major structural work.[5]

Within this principle of Universal Design, Selwyn Goldsmith, an architect who is a wheelchair user and who has a wealth of experience in accessible building design principles is keen that people with sensory impairments are considered. He provides food for thought when designing for people with visual impairments by providing a list which includes suitable lighting with an avoidance of glare, defined stair nosings, identification of the position of fully glazed doors, use of symbols to alert visitors, accessible toilets, large printed information, signage and captions, use of colour contrast, use of sounds for emergency warnings and other information such as lifts, and projecting guard rails to exposed differences in museum floor levels.[6]

This list should not just be seen as an assistance for people with visual impairments, but defining elements of a building more clearly will be beneficial to everybody. When museums make changes for people with disabilities they are embracing social inclusion as well as combating social exclusion for all.

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[4] Further discussion of universal design is available on the website for the Center for Universal Design at North Carolina State University - www.design.ncsu.edu/cud/
[5] S. Goldsmith, *Designing for the Disabled: The New Paradigm*, 1997, p.191
[6] Ibid., p.192

Goldsmith advocates design for "architecturally disabled" people, and is perplexed as to why there is legislation, the DDA, which only focuses on people with "impairments", as he describes it. He terms this "socially exclusive" and advocates legislation which provides regulations for access for everyone. More people than those who come into the categorisation of 'disabled' under the DDA can encounter difficulties in accessing buildings, for example, people who use pushchairs can find entrances with stairs difficult to negotiate.[7] There should be legislation to meet all the requirements of people who are 'disabled' by buildings, not just those who have 'classifiable' disabilities. The formation of a design standard would be problematical, as discussed earlier in chapter 3, but there should at least be some form of guidance for architects and designers, to know where to draw the line; however, such 'rules' could be said to negate the principle of Universal Design in as much as 'exclusion' of sorts would still prevail.[8]

Most museums and galleries as we know them today, including all those surveyed here, were in existence before the advent of the DDA, and the development of the concept of universal design. Consequently, there are varying degrees of difficulty when the museums' buildings are used by people with disabilities.[9] This is not the fault of those currently in charge of the museums but it is they who now face the responsibility of providing a solution. The issue of including people who have been and are subject to social exclusion encourages the need to investigate change. As discussed in previous chapters, the move for museums to confront issues of social exclusion can alter the perception of the museum space and who it is for.

The final phase of the DDA requires service providers to make structural changes to their buildings to become 'fully accessible' for people with disabilities by 2004. For some buildings this will be easier than for others, and

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[7] S. Goldsmith, *Designing for the Disabled: The New Paradigm*, 1997, p.152
[8] S. Goldsmith, "Access all areas", *The Architects' Journal*, 15th March 2001, p.44
[9] S. Goldsmith, *Designing for the Disabled*, 1997, p.62

some buildings are protected from alteration by Listed status. Buildings can be listed because of age, rarity, architectural merit, and method of construction, and the process endeavours to safeguard historical and architectural interest. The Historic Buildings Council (now the Historic Buildings and Monuments Commission) makes listing recommendations and these are approved by the Secretary of State. Buildings are organised into five groups[10] for the purposes of listing and there are three classification grades. Grade I buildings which are of exceptional interest, Grade II* which are particularly important buildings of more than special interest; Grade II are of special interest, warranting every effort to preserve them. Such buildings were built for a defined purpose, which was not accessibility to people with disabilities, so any museum building within these confines will be difficult to amend for all access purposes. Grade I buildings have very strict prohibitions on all types of alterations, excluding the use of colour on the treads of stairs.[11] Grade II buildings can have alterations made to the interior. Museums housed within Listed buildings will have less opportunity than others to meet successfully with the guidelines produced in response to the DDA, but the Act should still be considered and any possible changes contemplated. The original use of a building should be taken into account when assessing the success of a museum for disabled visitors; a building may not originally have been designed for public visiting, for example.

BUILDING REGULATIONS

There are regulations for the construction of new buildings concerning access for people with disabilities. In Scotland this is the Building Standards (Scotland) 1990 Regulation 33, Technical Standards Part T.[12] This

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[10] The groups are: all buildings built before 1700; most between 1700 - 1840; 1840 - 1914 buildings of definite quality and character, including principle works by principle architects; 1914 - 1939 high quality buildings; outstanding buildings after 1939

[11] See chapter 7

[12] "Disabled people" are defined here as "persons with a physical, hearing or sight impairment which affects their mobility or their use of buildings."

sets out requirements under the headings of Provision of access, Means of access, Sanitary facilities and sanitary accommodation, and Areas of fixed seating. With the advent of Devolution, amendments have been proposed and passed to Part T in 2000 by the Scottish Parliament. The basic requirements in Regulation 33 relevant to museums were that a building which comes under purpose groups 2 - 6 and had ground floor access, should be provided with adequate access for disabled people, sanitary facilities should have adequate provision for disabled people, and there should be adequate level spaces for wheelchair users in fixed seating areas. In the amendments, it is recommended that regulation 33 is revoked as a separate entity and the requirements interspersed in the main body of the Act. As such, there is now Part T which covers both public buildings and dwellings and sections T2 and T3, which deal with public buildings specifically; all are relevant to museums. T2 covers access to the buildings and T3 covers the facilities inside the building.[13]

Rather than assess Part T in its entirety at this point, the relevant sections will be detailed with the corresponding architectural component in the subsequent sections of this chapter. However, common to all of them is that Part T does not consider adequately the different physical abilities of people with different disabilities. For example, the capacity to reach is not considered when designing the height at which building furniture should be set, for example, reception counters and display cases in museums and galleries. Nor are sensory or intellectual disabilities considered - there is no mention of tactile signage, for example. The regulations refer to size of space and provision of lifts which refer more to physical disabilities, but these are the easiest things to regulate. Something which would affect visually impaired people, for example, glare, cannot be legislated for by an architect trying to use daylight: these issues have to be dealt with later and it is the DDA which has to encourage this. Regulations are always set at a minimum level, although it is always possible to construct buildings to a greater than minimum requirement.

[13] Housing is also considered under Part T. Purpose building groups 1 - 6 are now considered as a whole and The 'Disabled Access Guide' and BS5810 have been amalgamated into the main text

The majority of the 'active' population has always been able-bodied, hence the bias in building design. If the situation were inverted, buildings would be very different, all with lifts and more spacious, with stairs included for emergency. The current socially inclusive atmosphere advocates a compromise between the two. It can be expensive to budget for ramps or lifts, for example, to provide an addition to stairs and it requires a deliberate effort to increase the usability of a building. However, such alterations do not only assist people with disabilities. Ramps can make access easier for elderly people and parents with pushchairs, although for some people with mobility difficulties, ramps can be a problem.[14] People with physical disabilities are the ones who pose the greatest design problems for architects as they necessitate the greatest alteration to the physical structure. However, people with visual impairments also benefit from the modifications. Walking and climbing steps, for example, is still possible, but there is evidence that colour contrast could also aid navigation.[15] It is important that the needs of people with sensory impairments are taken into consideration and that design changes made are appropriate.[16]

The external environment is generally unforgiving towards people with visual impairments and with the population of visually impaired people likely to enlarge with the increase of the elderly population, architects and designers should be motivated to develop their designs accordingly.[17] The DDA intends to assist this motivation.

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[14] People using a prosthesis can find walking up a gradient more difficult than the more controlled gradient of a stair.

[15] Further discussion on colour contrast follows in chapter 7.

[16] S. Goldsmith, *Designing for the Disabled: The New Paradigm*, 1997, p.206

[17] See chapter 2 for information concerning the link between visual impairment and age

ARCHITECTURAL TRAINING

Organising of architect training is done by UK and Scottish governments and there are six Architectural Schools in Scotland, which come under the banner of the Royal Incorporation of Architects in Scotland. Part T of the building regulations should be understood and, in general terms, access issues for people with disabilities in building design is part of the training syllabus for architects. However, architects receive a design based education and work on projects where they will incorporate the design briefs as appropriate. The emphasis of the appreciation of people with disabilities in building design can vary because of this.[18]

Some schools offer talks by the Dog Rose Trust, the ADAPT Trust, Disability Scotland, and the RNIB. Sebastian Tombs of the Royal Incorporation of Architects in Scotland has worked with the Glasgow School of Art as well as The ADAPT Trust to try to encourage students to think about different building users.[19] Selwyn Goldsmith, a respected authority on universal design, states in his book *Designing for the Disabled: The New Paradigm*, that he has been a practising architect with specialism in this field for 35 years and he has only been asked to give lectures within architectural schools four times.[20]

Meeting with disabled people and trying to access buildings in a wheelchair will give an idea of the problems faced but not the absolute frustration of the disability.[21] Some buildings which expect a varied visitor base are built to receive this, such as hospitals and supermarkets which usually have a

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[18] Information provided by representative of the planning section of the Royal Incorporation of Architects, Scotland, during telephone conversation, 12th February 2003

[19] The ADAPT Trust intended to publish a book on good practice in Summer 2001, by Wycliffe Noble and Geoffrey Lord. As yet, I have found no evidence that this publication has been completed.

[20] S. Goldsmith. *Designing for the Disabled: The New Paradigm*, 1997, p.63

[21] S. French, Chapter 11, "Simulation exercises in disability awareness training: a critique", in M. Oliver, *Understanding Disability - From Theory to Practice*, 1996, p.117

corporate design base. There is every reason why new museums and galleries should be adapted as far as possible to cater for a varied visitor base. Whereas the majority of visitors may be able to cope with more "standard" provisions, it is important to accommodate the minority who are important to the museums and galleries but find the visit more difficult.

The DDA will encourage a change to the current emphasis on the access for people with disabilities in building design in 2004 but has still allowed nine years since the initial enactment of the legislation for 'bad practice' to continue. For museums, the situation can be assisted by allowing people sensitive to disability issues, such as an Access Auditor, and visitors with disabilities to be on board at an early stage of any planned developments, and kept on board, to consult with and cajole architects and designers.[22] In this way, compromise can be reached for provisions which are achievable and can be reached to maximize layout, information and interpretation potential. Some museums may be constrained by their governing bodies as to which architects they use but that should bear no relevance to architectural training and in fact enhances a uniformity of accessibility training.

Physical changes to buildings can include automatic doors which can help people in wheelchairs and with pushchairs, handrails, improvements to stairs, and ramps, all an investment for years of access. More sophisticated audio systems which operate by the use of infra red triggers can be difficult to add to an existing building due to the need for extra wiring. However, audio guides which operate with CD or tapes using headsets are more cost effective. The costs involved can be a barrier for increasing access and inclusion, especially with the problem of designers not always complying with their proposals and the money not being available to correct misinterpretations, as

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[22] Meeting with Marion Bourbouze of "THE AUDIENCE BUSINESS" in Edinburgh on 15th October 1998. The company, "THE AUDIENCE BUSINESS", aims to increase audiences for all performing arts and was set up in July 1998. Their report is: Marion Bourbouze, Edinburgh Audience Development Initiative, *Marketing the Arts to Deaf and Blind People*, SAC and City of Edinburgh Council, June 1998.

well as ever-changing exhibitions and their different requirements. There are increasing funds available for Scottish institutions from the SMC Access Fund, with the support of the Department for Culture, Media and Sport, which wanted to see resources allocated towards making museums more accessible.[23] Partnerships with local organisations could negate excessive cost but there is still the time and planning issue, and the cost of the equipment. Provisions can go as far as setting aside rooms particularly aimed at visually impaired people, or bringing in visitors, such as the National Gallery of Scotland's plans to provide trips for people from the rural areas of Scotland to experience the collections with art scholars, and to encourage art scholars to go out to community centres and lecture:

> We may be sitting in an ivory tower, but we have to build bridges to that ivory tower or we are lost.[24]

There is little research in the area of access for people with disabilities, particularly people with visual impairments, to museums so architects have little concrete evidence to refer to.[25] The following chapters highlight some of the research available which has been carried out and this thesis adds to it.

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[23] Information gained from a presentation by Fran Hegyi at the SMC Regional Meeting, Aberdeen, 28th June 2000. The fund is for proposals to develop new or existing audiences, encourage participation in museums and support touring exhibitions involving designated or national collections. It is part of the Revenue Grants programme and two awards have been made in Scotland, to the Hunterian Art Gallery Goes Into Schools project with Advanced Higher pupils, and the Pollock Kist project with the Open Museum in Glasgow, allowing local people to develop a mini-museum in their community.

[24] A. Dalton, "Clifford draws up art scheme for the people", *Scotland on Sunday*, 30th January 2000, p.9

[25] See chapter 7 for information about Project Rainbow, research into issues of colour and contrast in buildings for access for people with visual impairments.

VISITING MUSEUMS

A visit to a museum and gallery involves various stages, therefore, with 'obstacles' to overcome. These can be easy or difficult depending on the person completing them. The difficulty increases for a disabled person. Older buildings, whether listed or not will be more difficult to access than more modern ones since they did not have any building regulations to abide by and older buildings were built at a time when disabled people were not considered deserving of any special consideration. For that reason alone, older designs are more hazardous to negotiate, with a preference for steep steps, no provision of lifts, and so on. It is more difficult to enact change on an existing structure than to provide facilities in a new building.

There are several stages to a museum and gallery visit, the car park and the approach, the entrance doors, the reception/box office area, signage, lateral circulation around the floors, the exhibition space, vertical circulation between the floors, amenities such as cafe and shop, particular facilities for visually and hearing impaired people, accessible toilets, and the emergency exit. Involved in most of this will be elements of building management and the parameters within which they must adhere.[26]

Lateral and vertical circulation are the principle concerns of this chapter. Lateral circulation involves the movement around the levels of the building using doors, thresholds, floors, corridor widths, and negotiating extra elements of "furniture" such as radiators, fire extinguishers, and similar. Vertical circulation involves the use of ramps, lifts and stairs.

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[26] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People* - Pocket Guide, The ADAPT Trust, Edinburgh, 1999, p.12-13

MATERIALS

The type of materials used for buildings is also an important consideration. Glass and marble surfaces can cause echoes to reverberate around the building if used for floor surfaces, and sound will bounce off them if they are used for other surfaces. However, noisy and resonant floor surfaces can help visually impaired people develop a sense of space from the echo. Large expanses of glass create problems of reflection, and even the method of preventing this, non-reflective glass, can mean that it is more difficult to see that glass is there, as well as this glass especially affecting the colour of the objects. Wood, particularly if kept polished, can become unsuitable due to being reflective and slippery. People who do not have disabilities can negotiate most surfaces although anyone can slip on a shiny floor. Materials used in buildings can also cause problems for infra red signals, for example: infra red cannot pass through metal so if metal pillars are part of the design it could affect an audio guide or hearing aid system.

ADVISORY BODIES

The ADAPT Trust advocates consideration of disabled people when designing new buildings and consultation to make amendments to the Building Regulations. This is partly for the reason that the recommendations may well be increased in time and so the buildings will comply with the standards for a longer period and also because it does not believe the minimum regulations are sufficient. The Dog Rose Trust adheres to the concept of Universal Communication, which includes work with audio guides; use of these auxiliary aids can only take place successfully within a successful, and Universal, Design.

FIELDWORK

The following assessments of the architectural elements of the museums were completed using comments from the volunteers. It has been discussed in chapter 1 that museums, with their place in the cultural sector of society, can face the challenge of social exclusion and formulate socially inclusive practices. Previously in this chapter, the changes which could be made to buildings to increase the opportunities for people with visual impairments have been highlighted. Museums do have to abide by building legislation and the Building Standards (Scotland) is used here to show the regulations by which buildings should be constructed. The fieldwork was not approached from the point of view of comparing the specified measurements with the measurements of the museums visited. The volunteers commented on the practicality of the building design:[27]

The results of the visits are presented below. Due to the number of different elements on which observations were made by the volunteers, it was decided to deal with them individually. It became apparent during the evaluation that examples of 'good practice' and 'bad practice' in most of the areas particularised by the volunteers, went almost hand-in-hand.

GROUND LEVEL ACCESS

The easiest way to access a museum or any building is if the entrance and circulation area are all at ground level. This was the case in some of the museums visited but whether their situation was decided because of ground level access for people with disabilities is questionable. In some cases the condition of the pavement was a contributory factor to difficulties of access but this would not be within the museum's jurisdiction to do anything about. For

[27] Fire safety is also important and it was specified that refuges should be kept clear and identified at all times. Fire exits were not utilised by the volunteers during the visits so are not included in the discussion.

example, to enter the Fergusson Gallery, the pavement approach is long and there are some uneven sections which cause difficulty for all visitors. A museum can report the problem but would not have the responsibility to make the repair, unless it was on land belonging to the museum. The St Andrews Preservation Trust has ground-level entrance along a path from the pavement which is quite narrow. Widening the path could possibly not be an option here due to the Listed status of the building. (Figure 21)

Another factor in creating ease of access at ground level depends upon whether the pavement or area around the museum is on a slope. This is perhaps something which could be considered when siting new buildings; museums already situated cannot change this situation easily. For example, The Stills Gallery has ground-level access to the entrance but it is sited in a steep street: it would be very difficult for a wheelchair user to power himself/herself up the street. The Museum of Childhood is in a similar situation. The Museum of Scotland building has a level entrance which also provides a front entrance suitable for people with mobility difficulties to the neighbouring Royal Museum of Scotland. Again, this is on a slope although a much slighter one than the previous two examples. (Figure 22) The situation of the City Art Centre secures it true level access to its entrance.

The Crawford Arts Centre, St Andrews, has a gravel courtyard which could prove difficult to negotiate but has also laid down a paved path wide enough for someone who preferred a level area to use and to ease passage for wheelchair users. This is an example of good practice, providing enough of an alternative surface which people with visual impairments would prefer to enable them to be sure of their footing.

Another assistance would be to provide an alternative entrance at ground-level. The Collins Gallery has an entrance at street level, as opposed to the main entrance which involves negotiating steps. The Kelvingrove Art Gallery and Museum provides a similar facility.

Figure 21 - The main entrance to the St Andrews Preservation Trust Museum

Figure 22 - The main entrance to the Museum of Scotland, Edinburgh, which also provides level access to the Royal Museum of Scotland

RAMPS

Part T in the Building Standards (Scotland) states (T2.2)

> The means of access to the principal entrance of a building from the point of entrance at the boundary, and from any car parking within the boundary, must be level or ramped and suitable for disabled people.

This is important to remember, for example, when there is a dropped kerb between the car park, road, and entrance. Museums and galleries which have their entrance on a street-level could investigate alternatives of raising the pavement level rather than building a ramp. Level approach must not exceed 1:20 gradient and ramped approach 1:12, with 1.2m unobstructed width except at handrail level where width may reduce to not less than 1m and ramps not longer than 5m or 10m where gradient is no more than 1:15. Landings must not be less than 1.2m long from the edge of the door swing and 1.5m long between flights of stairs. A raised kerb of at least 100mm high is necessary on any exposed ramp edge and where a ramp is longer than 2m, a continuous handrail on each side is necessary, extending at least 300mm beyond the top and bottom nosings allowing for a firm grip and terminating in a closed end which does not project into the route of travel.

Ramps can be used at museums and galleries either on the approach to the entrance or between galleries. An entrance area to an institution should be as clear and as non-slip as possible, even when wet, avoiding gravel and anything likely to cause an uneven surface, such as cracked pavings. A short route between car park and entrance is also recommended by the ADAPT Trust to make the journey easier.[28] Internal ramps were recommended to be not less than 1500mm in length to maximise the 1:12 gradient

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[28] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People* , 1999, p.5. The recommendation is for the distance to be less than 45m

recommended in the Building Regulations. It is worth noting that a gradient of 1:10 is considered the maximum for a lorry, a far more powerfully propelled vehicle than someone moving a wheelchair. Therefore, it would seem that the Building Regulations are in need of refinement. A landing at the top of a ramp of 1200 x 1800mm is recommended for manoeuvre and safety and ramps should not be longer than 10m between landings.[29]

There also needs to be a mechanism to summon help in areas where a disabled person may require assistance. Several of the museums visited provided ramps either as a means of external or internal access. The gradient of ramps was not commented on by the ambulant volunteers and the surfaces were described as even and easy to negotiate in all instances.

EXTERNAL RAMPS

One example of good practice which a museum can potentially effect if the surrounding outside area is uneven or steps are offered as the main means of access to the building is to provide an external ramp.

Several museums provided a ramp as an alternative to steps up to the entrance of the building feature. The ramps which were tested during the visits all proved easy to navigate so could be assumed to meet the required standards for steepness of slope. All the ramps featured here are permanent but the option of a temporary removable ramp could be considered. None of the museums visited for this research offered the facility at this stage. Cost of either a permanent or temporary ramp is a consideration and fund-raising over a period of time might be necessary. Crail Museum has undergone this process and has established a timetable to make provisions, including a ramp, to increase access to the ground floor. The Crawford Arts Centre is also

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[29] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People* , 1999, p.21

considering investing in a temporary ramp to ease access to parts of the building complex.

The McManus Galleries, Dundee, has a small, gentle ramp up to its front door. (Figure 23). Kirkcaldy Museum and Art Gallery has an elaborate ramp structure leading to its entrance, a quite recent development which greatly increases the opportunity for access. (Figure 24) The British Golf Museum has a ramp up to its entrance from the car park area. (Figure 25) Pittencrieff House Museum (Figure 26) and the Andrew Carnegie Birthplace Museum, Burntisland Museum, Fife Folk Museum, the Scottish Fisheries Museum, St Andrews Museum (Figure 27) and St Andrews Cathedral Museum all have ramps to their entrances. The National Gallery of Scotland and the Scottish National Portrait Gallery, Edinburgh have ramps in addition to stairs at their entrances, although the ramp at the Portrait Gallery requires users to enter through a different entrance from the main body of the visitors. (Figure 28)

INTERNAL RAMPS

Ramps can also be used to ease vertical circulation within a museum. There were examples of this type of feature found during the visits. Aberdeen Art Gallery has a ramp which begins next to the exterior steps and continues into the main body of the building. The Scottish Fisheries Museum, Anstruther, has ramps throughout its galleries, which were the result of a fundraising campaign. (Figure 29 and 30) Alternatives are offered to steps at the Talbot Rice Gallery where the four steps from the white gallery to the red gallery are covered by a fixed ramp which is in fact quite steep. (Figure 31) The Museum of Childhood has a ramp into the first gallery from the entrance hall and provided a relatively easy gradient to use.

Difficulties posed by a building being Listed are presented by Perth Museum and Art Gallery, where the upstairs gallery can only be reached

by steps. Structural changes cannot be made to the interior of the gallery but there are no alternative methods provided to view the upstairs gallery, by means of leaflet or video or similar. This could be seen as 'bad practice' but issues of cost could perhaps come into consideration. The Andrew Carnegie Birthplace Museum has ramps to the main gallery area but only stairs to the upstairs section. Albums of photographs of the upstairs displays are offered to visitors who might not want to climb the stairs or cannot climb them. This could be seen as an example of 'good practice'.

The Museum of Scotland provides a ramped entrance up to the reception area. This ramp is quite long and does not have any means of summoning help from the bottom, a problem as it can be difficult for people in wheelchairs to propel themselves uphill for a long distance. (Figure 32)

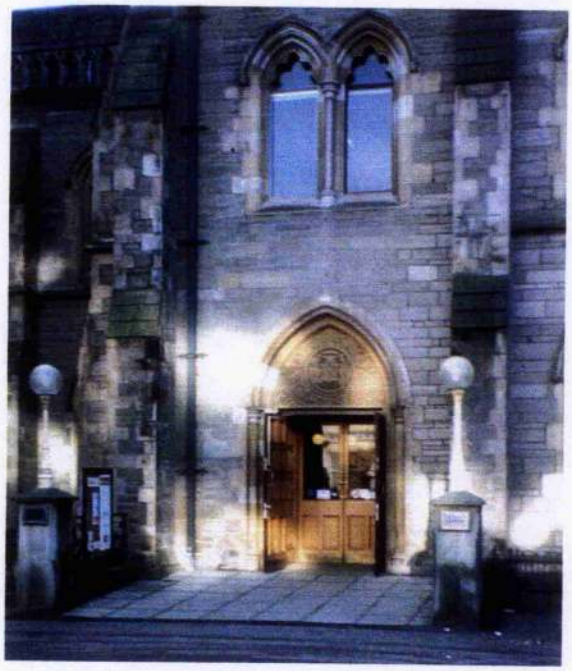

Figure 23 - The ramp at the entrance to the McManus Galleries, Dundee

Figure 24 - Two views of the ramped entrance to Kirkcaldy Museum and Art Gallery

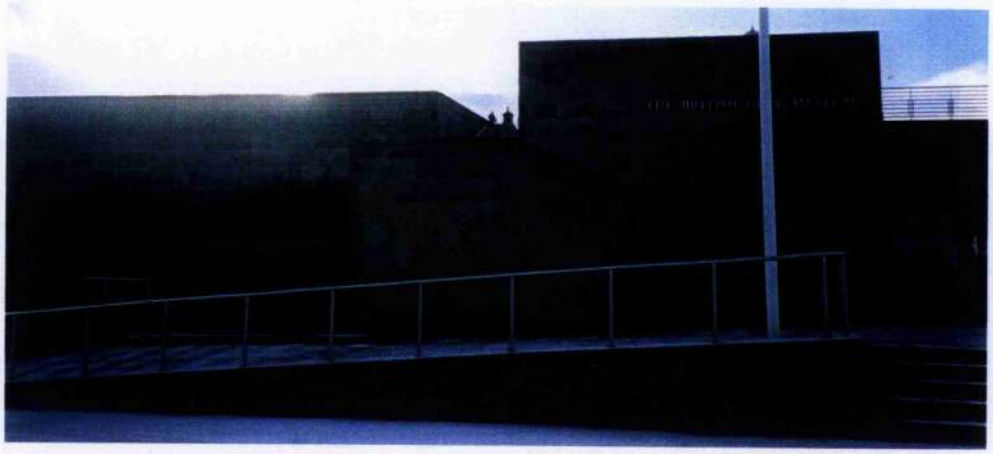

Figure 25 - The ramp leading from the car park to the entrance of the British Golf Museum, St Andrews

Figure 26 - The ramped entrance to the Pittencrieff House Museum, Dunfermline

Figure 27 - View of St Andrews Museum, showing ramp and stairs approach to side entrance

Figure 28 - The entrance to the National Gallery of Scotland, Edinburgh, showing the alternatives of a ramp and stairs; the ramp pictured can be accessed by another ramp to the left of this photograph

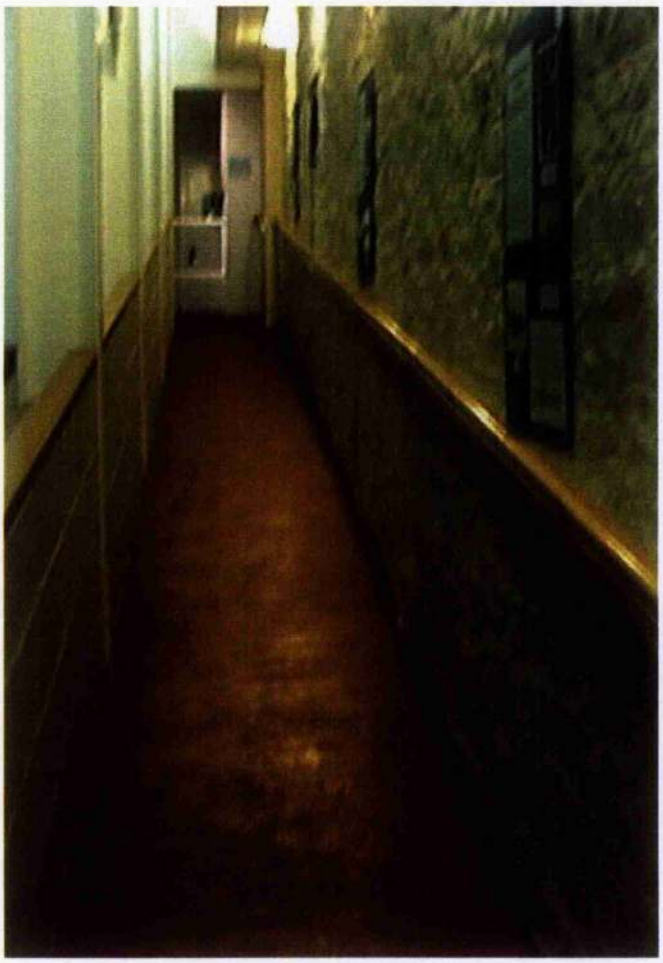

Figure 29 - The ramp leading from the entrance area to the viewing area of the *Project Zulu* gallery, Scottish Fisheries Museum

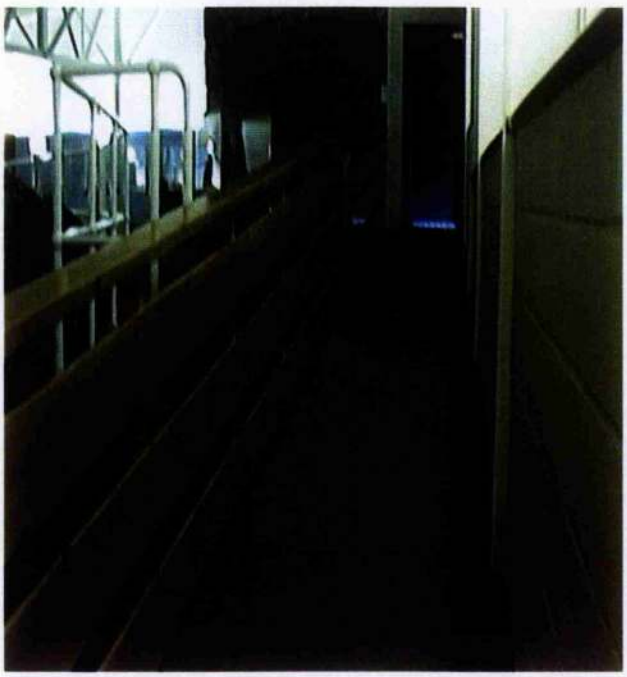

Figure 30 - The ramp leading from the viewing area to the exhibition area of the *Project Zulu* gallery, Scottish Fisheries Museum, Anstruther

Figure 31 - The ramp provided as an alternative to the stairs between the White gallery to the Red gallery at the Talbot Rice Gallery, Edinburgh

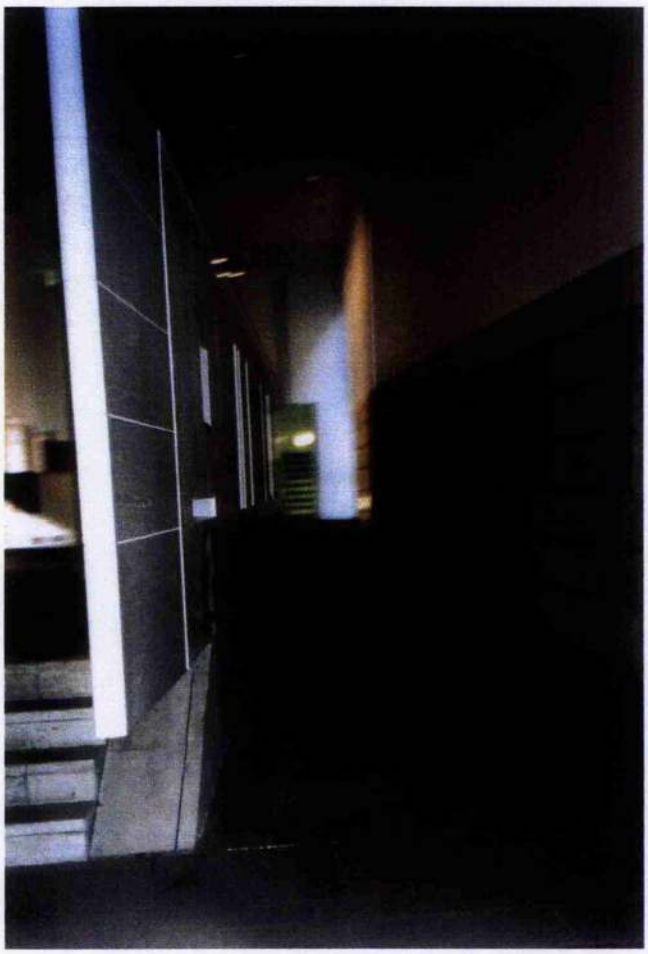

Figure 32 - The ramp leading from the main entrance foyer to the admissions desk at the Museum of Scotland, Edinburgh

WALLS

In some instances, walls provided a problem for navigation, especially if they were partition walls as opposed to solid. The best practice for museums is to have solid walls which the majority of those visited have. Museums which opted for what was considered 'abnormal' wall design, for example partition boarding, attracted unfavourable comment from the volunteers, and could be considered to be 'bad practice' in terms of provisions for people with disabilities.

An example of problems caused by the use of partition walls is the instance at the Museum of Scotland, when a visually impaired person using a white cane broke it when the tip became trapped underneath the ridge between the wall and the floor.[30]

The shape of a building can also be important for assessing size. A 'square' corner can cast a very definite shadow whereas a circular building loses this visual clue and it can be difficult and disorientating to negotiate an area such as the galleries at the Fergusson Gallery. Perth Museum and Art Gallery has large skirting boards in the gallery used for the exhibition entitled 'Big', which took place in November 2000 when the visit to this museum was completed. This could distort the impression of the height of the wall. Technically both these instances are examples of 'bad practice' for a museum and access for people with visual impairments.

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[30] This was reported by a participant at the INTACT seminar, St Andrews Museum, 24th February 1999

FLOORS

The floor is perhaps the most crucial surface for a visually impaired visitor when it comes to navigation. A change in surface can indicate a move from one room to another, for example: if the floor is to be used in this way, it is important that the reason for the change is made clear. The material used for the floor is important as the echo of footsteps can assist a visually impaired person to assess the size and nature of the space they are in, and a change in sound can also indicate a change in the space they are moving through. Floor surfaces should be non-slip for safety reasons and, whereas a smooth floor might assist wheelchair users or people using pushchairs for children, a more 'resilient' surface would give a visually impaired person more confidence that it was safe to proceed along. The ADAPT Trust suggests a smooth surface is most appropriate but is aware of the potential for slipperiness.

Detailed below are a few instances where opinion was expressed and where changes in floor coverings have been implemented.

The majority of the museums visited had wooden floors and carpet was also used. The Fergusson Gallery opted for a wooden floor in the galleries and carpeted stairs. The Museum of Childhood had carpeted galleries and used an uneven black plastic surface for the balcony and stair area, forewarning a change between gallery and outside area. (Figure 33) The Talbot Rice Gallery has a carpeted area outside the entrance to the wooden floored gallery.

Where doors were not used or visible as demarcation between display areas, a change in floor surface was deemed an important alternative. Door mats were given several specifications: they should be fixed to avoid slipping underfoot and should also be flush with the floor to prevent tripping. The Stills Gallery has a ridged mat at its entrance, which was fixed and prevented slipping.

Figure 33 - An illustration of the change in floor surface between the staircase area and Gallery 1 at the Museum of Childhood, Edinburgh

Floor surface choice seemed to be subjective amongst the volunteers but there was a consensus that there needed to be a warning of floor level change by a change in floor surface.

DOORS

There is a variety of different types of doors used for entrances - automatic, revolving, pull, push - all presenting their own difficulties and advantages. Entrance doors must (Part T T2.3) have a clear opening width of 800mm and have unobstructed space on the side of the leading edge of the door of at least 300mm, unless the door is automatic, and it must have a glazed panel from 900mm to 1.5m above floor level if it is an external door (T2.8). Revolving doors must have a hinged alternative. Hallways must have space for a wheelchair and an assistant and an able-bodied person must be able to pass (T2.4)

Doors can be difficult to manage if fastened by heavy spring closers; the door needs to be easy to open if it cannot be left open all the time, particularly for wheelchair users who have greater difficulty manoeuvring doors. However, fire regulations stipulate that if there is a door it should be shut; this works against the access-for-all criteria, but lightweight springs or automatic doors can be installed.

The ADAPT Trust provide more detailed recommendations than the Building Standards. The Trust considers that doors should be 900mm wide and 750mm for each one of a pair of double doors. Any glazed areas should be framed and marled with something more distinctive than etching. Alternatively, doors should have a wooden cross-piece to break up an expanse of glass to make the door easier to see. It is also possible to break up the expanse of glass by affixing posters advertising current exhibitions to the doors. Kickplates should be at least 400mm high to avoid doors being

damaged by wheelchairs.[31] Automatic sliding doors are preferred at main entrances, preferably activated by a sensor pad 1200mm above floor level. To ensure people know the door is open, a sounder is recommended and also adequate timing to allow people to walk through doors before they close. Spring closers can make doors heavy to operate so ball-bearing hinges should be used. If doors are to be open in the corridors then electromagnetic catches are preferred. Wheelchair users would benefit from vision panels 900mm from floor level.[32] Hallways should be clear and wide enough for people in wheelchairs and people with white canes etc to negotiate. If there are several sets of doors, it is preferred if all open in the same way and are not too close together.

The majority of museums visited had push or pull doors. Glass was a component of the majority of doors, which was acceptable to the volunteers provided that the expanse of glass was divided by differing materials which aided the identification of the feature as a door so that people would not walk into it. Glass is also an important component of other parts of the museum especially in display cases: these are considered in the following chapter.

Aberdeen Art Gallery and the Marischal Museum both had doors with small windows at the top of a wooden frame; during the visits, these doors were permanently open. The McManus Galleries had similar doors which remained closed but were easy to distinguish from the building surrounds and also quite light to push open.(see Figure 23)

Glass is used in doors at the Crawford Arts Centre but has a wooden cross-piece which divides up the glass. St Andrews Museum,

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[31] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People* , 1999, p.8
[32] Ibid., p.9

Scottish Fisheries Museum, St Andrews Preservation Trust, St Andrews Cathedral Museum, Fife Folk Museum, Crail Museum all used a similar design. The Museum of Childhood had glass doors but also had a black wood or metal bar across the middle of the glass. The main entrance door to the Collins Gallery was wooden framed with small windows and metal kick plates.

The Stills Gallery and the Collective Gallery used a predominantly glass door but had a metal handle at the side to push or pull, which assisted with orientation. In both cases there was a defined wooden frame around the door, and the size of the glass would differentiate this area from that of a window. The other museums visited had either full wooden or half wood-half glass doors which were either left open or successfully navigated by the volunteers.

Kirkcaldy Museum and Art Gallery opted for automatic doors which opened easily and quickly when approached. Their presence could be detected by the noise of them opening.

Kelvingrove and the Gallery of Modern Art both had predominantly wooden doors which were left open during opening hours.

Perth Museum and Art Gallery had either a wooden push door or a revolving door. Revolving doors can be confusing for people with visual impairments because of the confined space and the changes between light and dark as the doors move around. The British Golf Museum used glass revolving doors which would potentially allow in more light but would still be confusing, and there was also the difficulties with visibility of a pure glass door, highlighted above. There are pale grey aluminium push bars across the panes of glass but the definition was not pronounced enough for these bars to 'break up' the glass clearly.

The Museum of Scotland had glass entrance doors which were very difficult to see, having only small grey circles to 'break up' the surface and thin aluminium handles. Another problem with pure glass doors is reflection of the lights bouncing into the visitors' eyes. In this museum, the reflection of the lights in the outer foyer area caused difficulties at the start of the visit.[33] (Figure 34)

STEPS AND STAIRS

Part T, T2.6, says steps and stairs for ambulant disabled people and a means of unassisted access from level to level for wheelchair users should be provided. This requirement needs a stair with an unobstructed width of 1m, and a rise no more than 1.8m in a flight and a uniform rise not greater than 170mm and a uniform going not less than 250mm. Risers that are not open minimise tripping risk, landings at top and bottom of 1.2m, colour contrasted nosings. If there are 2 or more rises, there must be a continuous handrail on each side extending at least 300mm beyond the top and bottom nosings, with a firm grip and not obstructing beyond the ends of the stairs. A volunteer made the point that if stairs are to be used, it is easiest if the distance from the landing area at the top of the stairs is the same for each set otherwise it is confusing.

The majority of museums visited for this research offer stairs as the most obvious means of vertical circulation between floors. The Gallery of Modern Art has stairs but the lift here was more prominent and was preferred by the volunteers. The Collective Gallery was the only institution surveyed which was on one level only and was consequently the only one which did not have stairs. All the stairs used seemed suitable to ascend or descend in respect of the size of their treads and risers. Therefore it could be said that the museums use 'good practice' in stair design. The volunteers did pass comments on other aspects of the usability of the stairs and these comments

[33] See chapter 8 for further discussion of reflection.

are included in the following chapter as they related to issues of visibility of components of the steps and stairs. The following Figures are included to illustrate differing types of steps encountered. (Figures 35 - 37)

It is difficult to highlight 'bad practice', but The Writers' Museum, a Grade 1 listed building, was not designed to be used as the visitor attraction it has now become. The building would not originally have been built with a consideration for access by people with disabilities. As such, the stairs here are stone and steep which caused access difficulties for people with visual impairments, particularly as the stairs between the ground and first floor galleries were of uneven size and made for a very unsure ascent and descent. (Figure 38)

The top stairs on the staircase at Perth Museum and Art Gallery are curved with no nosing or handrail, although there is a wall close by on one side. The irregular shape and size of these stairs could cause them to be considered extremely hazardous for visually impaired people. This part of the gallery is possibly inside a Listed building and so alteration here could be difficult to effect.

The stairs to the outside entrance of the Talbot Rice Gallery are stone with no nosings or handrails. This may be due to the buildings being Listed. (see Figure 57)

Figure 34 - The door leading from the entrance foyer to the main building of the Museum of Scotland, Edinburgh

Figure 35 - The entrance to the Aberdeen Art Gallery, illustrating the two steps up to the main door

Figure 36 - The steps leading from the car park to the main entrance of the British Golf Museum, St Andrews

Figure 37 - The entrance to the Dunfermline Museum and Small Gallery, illustrating the steps up to the main door

Figure 38 - The entrance to The Writers Museum, Edinburgh, illustrating the spiral stairs leading to the galleries

HANDRAILS

The stipulations of Part T regarding handrails has been quoted in the ramp and stairs section. The ADAPT Trust feels that handrails on both sides of stairs are important; they should not be very cold to touch as this can cause shock and throw people off balance! They should be up to 1/2cm diameter and should extend 300mm beyond the top and bottom of the stairs, presumably on a level as opposed to a slope to indicate the end of the rise or dip. Obviously, the handrails should be non-slip. Tactile bumps on handrails can warn of the end of stairs. The height of a handrail is important also, 900mm above ramp/stair nosings and 1000mm at landings. Some people, such as children, will need a lower rail of 650mm. If a staircase is wide, a central rail is recommended to provide support to the other side. The rail should meet the wall or be infilled to ground level and have a definite end.[34]

Handrails are an important element to a set of stairs, providing support and balance. When a visually impaired person is negotiating a set of stairs, the handrail is an important aid to judge when to start to step down or up and when to finish. The angle of the handrail also provides an indication of the steepness of the steps. If the material used is slippery, for example, polished metal, it can assist in the hand moving down the rail, but it can also affect the safety of the support.

Handrails are found with the majority of the stairs in the museums visited. Some museums have two handrails, one either side of the stairs, for example the McManus Galleries beside its main staircase, St Andrews Museum and Fife Folk Museum. The Talbot Rice Gallery has two handrails on the stairs between the lower and upper levels of the White Gallery. (see Figure 31) The Marischal Museum has handrails either side of the staircase within the

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[34] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People*, 1999, p.20 & p.21

Collectors Display. The Royal Museum provided two handrails in the majority of cases, as did the City Art Centre. The National Gallery of Scotland and the Scottish National Portrait Gallery also provided two handrails. The Gallery of Modern Art, and Kelvingrove, both have two handrails on their interior staircases.

Some museums have one handrail and use a wall as the other means of support beside their staircases. This is a good compromise, according to the volunteers, if two handrails cannot be offered to provide support when ascending and descending. The Museum of Childhood offers both options between its different galleries. Andrew Carnegie Birthplace Museum, Pittencrieff House Museum, Dunfermline Museum and Small Gallery, Kirkcaldy Museum and Art Gallery, Crail Museum, St Andrews Preservation Trust Museum, Crawford Arts Centre, Aberdeen Art Gallery all have one handrail and an opposing wall surface to use as support on their staircases between levels, as did the Fergusson Gallery, The Writers Museum, and the.McManus Galleries on the subsidiary staircase between the levels. (see Figure 53).

There are some areas in the museums visited where handrails are not available which caused problems for the volunteers in maintaining balance and ascertaining where the stairs began and finished. The Marischal Museum did not provide handrails for the stairs between the temporary display area and the Collectors Display. The Stills Gallery did not provide handrails on the stairs between its levels and Perth Museum and Art Gallery opted for a handrail and a wall except at the top of the staircase where the steps became stone and curved; a handrail would have been most useful here.

The Museum of Scotland had many staircases and a variety of handrail options. The volunteer remarked on the shiny and therefore slippery nature of some of the handrails, and also that most of the handrails tended to stop before the edge of the steps and so gave a false indication of the end.

The stairs also jutted out beyond the edge of the wall so, as well as this being a problem for people using wheelchairs, it was also a problem as people walked off the edge of the last step into the path of others. (see Figures 58 and 59)

The majority of the volunteers suggested that a handrail on both sides added to the feeling of security and was their preferred option..

TREAD

The tread of a step should be level and wide enough for feet to be able to fit fully on, and should obviously be able to kept clear of obstruction. With one single exception, which might be termed an example of 'bad practice', this proved to be the case in all museums visited. The volunteer remarked particularly upon one set of steps at the Museum of Scotland which had little ridges between the main body of the tread and the edge of the nosing; this was a good idea in that it signified the edge of the step, but it was also the perfect size to trap the edge of a white cane or a slim heel of a shoe. This was the only example of such a design within the Museum of Scotland, and within all the museums visited for this research.

NOSINGS

The majority of museums visited had nosings on their stairs. The few that did not, and were commented on by the volunteers, are listed below.

Aberdeen Art Gallery's lack of nosings made finding the edges of stairs increasingly difficult during ascent or descent.

St Andrews Preservation Trust is a Listed building therefore the edges of the stairs cannot be altered to provide defined nosings. St Andrews

Museum is similarly Listed and the steps outside do not have nosings. (Figure 39) Dunfermline Museum and Small Gallery and Pittencrieff House Museum do not provide nosings to assist in navigating ascent and descent of their steps.

The Scottish National Portrait Gallery had green carpeted stairs with no nosings. (Figure 40) The rounded edges of the stairs which the carpet produced were commented on as potentially slippery by the volunteer. The black uneven surface of the staircase in the Museum of Childhood does not have nosings so ascent and descent is difficult here also. (see Figure 55)

RISERS

Risers are important in that if the gap between steps is left open, the resultant moving image as the stairs are negotiated can cause navigational problems, particularly for people who have difficulty with vision anyway. The ADAPT Trust warns against open risers particularly for older and visually impaired people as the resultant impression of 'flashing pictures' as the stairs are ascended can be disorientating. The ADAPT Trust also recommend risers of 1500mm to provide a comfortable step.[35]

The majority of the museums visited had stairs with risers but the Museum of Scotland was cited by volunteers as having several examples of stairs without risers and therefore providing difficulties for the volunteers to negotiate ascents and descents

The stairs at the Marischal Museum in the Collectors' Display area did not have risers but are situated in such a dark area that the volunteer could not see the stairs well enough to appreciate this.[36]

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[35] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People*, 1999, p.20 &p.21

[36] There are plans to redesign this area and some of the light levels are low for conservation reasons - see chapter 8

Figure 39 - The steps leading to the main entrance of the St Andrews Museum

Figure 40 - A flight of stairs between the galleries at the Scottish National Portrait Gallery, Edinburgh, illustrating the use of brass bars to define individual stairs, and also the potential difficulty of reflection

STAIRLIFTS

Stairlifts, which enable someone to be moved whilst still in a wheelchair, or with a companion accompanying them if a wheelchair is not used, are recommended in preference to chairlifts for wheelchair users because the latter requires someone to get out of their own wheelchair, or become separated from a companion; in the instance of a wheelchair user, the chair then has to be carried up the stairs. Stairclimbers cause the loss of contact with the ground by the user and can be frightening for people with any type of disability. Listed buildings cannot always accommodate a stairlift of any sort. If a stairlift or chairlift encroaches on the space taken by the stairs themselves, this can remove an appropriate form of vertical circulation for visually impaired people.

Some museums and galleries have a stairlift next to the stairs to the entrance and others have them as a mechanism to move from gallery to gallery.

Perth Museum and Art Gallery has a lift next to the inside entrance steps, to follow on from the ramp at the door. This looked quite tight to get into but was probably easier if approached accurately from the ramp.

The Crawford Arts Centre already has a stairlift inside and the Laing Museum, Newburgh, hopes to install a stairlift in the near future.

LIFTS

Part T, T2.5, states that a lift has to have a clear landing of 1.5m x 1.5m in front of the lift entrance doors and lift doors with width of 800mm. The car should be 1.1m x 1.4m and have a horizontal rail on 2-3 sides 900mm high. Controls should be, inside and out, 900mm - 1200mm above the floor and

400mm from the corner. Buttons should also be tactile on each storey and in the car and there should be voice/visual indicators if the lift goes above 2 storeys.[37] If comfort rather than convenience were focused upon, everyone would rather have a lift, except for those with a phobia against them. The lift needs to be spacious enough to accommodate wheelchairs and people using white canes; the required measurements are 800mm wide door and a space of 1400mm x 1600mm. Rails for support are also a help to all people and a mirror on the back wall will help people using wheelchairs to reverse into place; this may be confusing for people with impaired vision, however.[38] Doors should stay open long enough for manoeuvre, (the ADAPT Trust recommend 20 seconds), and the closure beam should be just that and sensitive to presence rather than touch.[39] Provisions should be made in case a lift breaks down. Alarm buttons should be positioned as carefully as other buttons.

A number of museums and galleries visited provided the benefit of passenger lifts.

Kirkcaldy Museum and Art Gallery, and the St Andrews Museum both have lifts, and Buckhaven Museum has use of a lift in the adjoining council offices during office hours so that visitors can access the exhibitions upstairs.

The McManus Galleries, Dundee, the Scottish National Portrait Gallery and the National Gallery of Scotland all have lifts, as does the Gallery of Modern Art, and Kelvingrove.

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[37] The ADAPT Trust recommends vocal indicators; further uses of sound in museums are discussed in the chapter 11.

[38] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People*, 1999, p. 22 and p.23

[39] Ibid., p.23 Ideally, lifts should be able to be used for evacuation purposes and designed to BS5588 Part 8.

Listed buildings are at an obvious disadvantage when making provision of a lift. For example, there is no sign of a lift at Perth Museum and Art Gallery so access to the displays of Communion tokens upstairs is directly affected. However, other Listed museums used in this research, such as St Andrews Museum, have lifts so this might not be the correct reason for the omission of a lift at Perth.

GENERAL EXHIBITION LAYOUT

Height is an important issue in displays, particularly with the mixed visitors a museum or gallery attracts. Part T does not cover this but Goldsmith extrapolates figures from various studies of disabled people. Mirrors can be used to make parts of objects visible to those who are not tall enough to see for whatever reason. Security can dictate the height of display but there are ways of surmounting this. Ideally the height of people who visit will govern the height of display and the reach also. Adults, children and wheelchair users need to be accommodated. The ADAPT Trust recommends that if you are 1000mm away from an object, the object needs to be 900 - 1400mm high: should exhibits be above or below these levels, at for example 750mm or 1900mm, angles should be used for display, for these examples 30 - 45 degrees.[40] However, a wide variety of people visit museums and galleries.

As well as the importance of typeface and the colour of signs, and their corporate style, their height is also an issue. They must be easily visible and easy to find and distinguish. Braille signs should obviously be placed lower than other signs and should be an addition not an alternative.[41] Labels should be between 1400 and 2100mm high, perhaps one at the lower and one at the

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[40] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People*, 1999, p.12

[41] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled People*, 1999, p.10 - Reception/Box Office

higher level to accommodate all visitors. Tactile labels need to be 800mm and 1400mm. Public telephones, another important facility in a museum and gallery, should be about 1200mm high.[42]

The volunteers found the height of objects in displays acceptable on the whole.[43] There was one instance where height of objects themselves was commented upon.

The Museum of Childhood has displays reaching down quite low as the curators are aware of children visiting and also because toys are usually found on the floor. (Figure 41)

GALLERY NEGOTIATION

Space is an appropriate criterion to view artworks and objects. It is difficult to quantify how much space an ambulant disabled person needs. In relation to a visually impaired person who uses a guide dog, or a white cane, which could get trapped beneath a display case which was not flush with the floor and particularly if room for navigation is limited, more space will obviously be required. The area required for turning is estimated to increase 800% upon the requirements of a 'normally' ambulant person.[44] If artworks are displayed on all sides of a tight space, viewing is awkward for anyone, particularly if it is difficult for eyes to focus. There should be sufficient area around the exhibits to allow visitors to get close to them and interactives need to have a reach distance between 200-250mm and with a 20 degree inclination.[45] Exhibition cases should be 750mm high and 850mm to the top.

[42] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled* , 1999, p.25

[43] See chapters 7 and 8 for further iscussion of the importance of the heights used in displays.

[44] S. Goldsmith, *Designing for the Disabled*, 1967, chapter 1 - The disabled population, Section 13 - Wheelchair users, subsection 1321 - Design criteria for wheelchair users: Space, p.19

[45] C. Wycliffe Noble, *Open Sesame, The Magic of Access - Designing Access for Disabled* , 1999, p.18

The volunteers commented on one or two instances where space and arrangements of objects was a problem.

The objects in the 'Big' exhibition at Perth Museum and Art Gallery were not given adequate space; whilst looking at the Big Ring Stone, it was possible to walk into the Plough.

It is important to have adequate manoeuvrability around the cases and chairs in a gallery. The volunteer found it awkward to move around the toys and chairs in gallery 2 in the Museum of Childhood. Gallery 1 was better where there was room for a wheelchair and a person to move past the cases and the central display. The World in Our Hands gallery at the Royal Museum worked from a basic plan but the pillars were already there; they did try to keep 1200mm between them and the cases but the volunteer still found it quite difficult to negotiate.

Touching can be hazardous if the pathway around a museum is not clear; for example, feeling the way around the Archaeology gallery in the McManus Galleries is precarious due to the glass which protrudes over the carved stones.

Figure 41 - A case from Gallery 2 at the Museum of Childhood, Edinburgh, illustrating the height at which objects were displayed

CONCLUSION

The research conducted into alterations and adaptations which could be made to the architecture of a building used as a museum is not taken to its furthest point within this study, as the DDA does not enforce changes to be made to buildings until 2004. However, the volunteers' observations clearly illustrate the number of elements that there are to consider when designing new buildings or assessing existing constructions in preparation for the 2004 regulations. Each stage of the "journey" round a museum presents a potential difficulty for people with visual impairments and, whilst there is no legal duty to make changes or alterations until 2004, minor modifications could be considered prior to that date to encourage the growth of an audience of visually impaired people. Such modifications are referred to in the subsequent chapters 7 and 8, regarding colour contrast and lighting.

The original use, and the age, of a building which now houses a museum will also affect the ease of accessibility and any modifications which can be made. Buildings designed specifically to house exhibitions and collections can take into account the needs of different audiences from the outset, but older buildings would have been built without such consideration. Alterations have to be approached sensitively and, if it is impossible for any improvement in the access for people with visual impairments and disabilities in general to be made, this needs to be explained clearly to anyone who enquires. Such buildings are exempt therefore from complying completely with the DDA but this is not the case for more modern constructions.

As architectural styles develop, more unusual ways of providing their features, for example the different styles of the stairs at the Museum of Scotland, will be inspired. These architectural innovations can provide as many obstacles for people with disabilities navigating around a museum as the lack of possibilities for making adaptations in an older construction. In modern buildings

a compromise has to be found between design and usability. Consultation and canvassing of the views of visually impaired people could provide a cost-effective exercise during the design stages of new or the refurbishment of older museums. The possibility of having an Access Audit carried out on the museum building could be investigated. This would highlight any areas of potential difficulty in providing access for people with disabilities and the information would be valuable when costing the requirements of compliance with the final stage of the enactment of the DDA in 2004.[46]

The museums visited during this fieldwork presented a variety of physical barriers for people with disabilities. The research also proves that sensory disabilities can provide as much difficulty in accessing a building as physical disabilities.

[46] The ADAPT Trust can provide Access Audits for buildings. see website: www.adapttrust.org

Chapter 7

COLOUR

...(you) need to find the door before you can use the handle.[1]

The combination of colours used on the fabric of a museum building, on walls, floors, doors, and stairs, and in exhibitions for labels, panels, and display case backgrounds, is particularly important for people with visual impairments. The ability to find a handle on a door, as in the example above, is certainly increased if different colours are chosen for the door and the handle.

Variation between the colours chosen is important; a cream door with a pale yellow handle would be very difficult to differentiate for someone with a visual impairment, and indeed the similarity of the colours would make navigation difficult for the majority of sighted people also. Sophisticated use of colour and contrast can enhance navigation of buildings and visibility of objects regardless of any visual impairment. Lighting and shadow are also important elements which can enhance or obscure colour contrast and may be factors in choices made.[2]

These issues of colour and contrast can be addressed when designing a new museum, designing a new exhibition, or replanning an existing display area. As in the previous chapter, regulations govern any change applied to a Listed building. Alterations to the exterior of a building are not always possible, for example, painting the edge of the tread of a stair to enable it to be seen more easily. Planning the colours to use for backing boards, labels

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[1] From a presentation by Stewart Coulter, at: "Open Sesame, The Magic of Access" - The ADAPT Trust seminar, Monday 13th November 2000

[2] See chapter 8

and similar within an exhibition area need not affect the fabric of the building itself, but navigation of the building for people with visual impairments will be affected by the lesser potential of using colour in decoration. The volunteers used in this research seemed to appreciate the potential difficulties but it did not stop them requesting an overall change of thought regarding the issue of colour contrast in museums and galleries. With the advancement of the DDA, it is up to the museums to think of 'reasonable' alternatives.

As well as navigation and identification, aesthetics are an important factor in colour contrast. Sometimes, if not all the time in some way, the surroundings of an exhibition or singular exhibit play their part in enhancing the work itself or the message of an exhibition. An archaeological artefact, such as a shard of pottery, would be easier to see placed against a cloth or backing of a brighter colour, but if the exhibition is representing how pottery is excavated, a brown background, possibly of a similar tone to the shard, might be preferred to make the exhibition work more successfully. Similarly, the colours for the lateral circulation area of a museum or gallery - walls, floors, doors, stairs - might be considered within the issues of aesthetics.

COLOUR VISION

Connected to colour and contrast and visual impairment is the issue of colour vision. 'Colour-blindness', as it is commonly termed, is generally an inherited condition, not developed by age, affecting 1 in 12 males and 1 in 200 females, totalling approximately two million people in the UK. It can affect the differentiation of certain colours and the ability to discern contrasts. In good light, the human eye can discern 10 million different shades. The use of the word "blindness" can be misleading in as much as the quantity of vision is not affected, just the quality of colour perception. Ophthalmologists use the more accurate term 'colour vision deficiency' (CVD) to describe the different colour perceptions some people have. There are various kinds of 'colour blindness',

with very few people unable to see colours at all and seeing everything in darker or lighter tones of grey. More usually people cannot see any difference between red and green in dim light and others cannot distinguish between red and green at all.

Scientists are still not absolutely certain exactly how we see in colour. We do know that the type of light affects colours. For instance, when trying to decide on the colour of something in a shop it is sometimes better to take it to a window so that it can be seen in natural light. It is now generally accepted that three different kinds of cone perceive three colours, red, green, and blue, and that all the colours we see are combinations of these three colours.[3] The often reported difficulty in differentiating between red and green for people who can be termed 'colour-blind' probably stems from the more common occurrence of damage to the cones which "see" red and those which "see' green. Evaluation of colour vision is most often performed with pseudo-isochromatic plates (Ishihara plates), but also by the 15-Hue Farnsworth-Munsell-D-15 test. Each eye is tested separately; on looking at a book of plates consisting of patterns of coloured and grey dots, someone with normal colour vision can easily detect numbers or figures composed within the multi-coloured dots. Those with colour vision defects have difficulty, or are unable to distinguish the numbers and figures. There are various combinations of colours used in the plates to categorise the specific colour vision defect.[4] The 15-Hue Farnsworth-Munsell-D-15 test provides a more precise determination of colour vision defects. Fifteen pastel-coloured chips with similar brightness but subtly different hues have to be arranged in a related, coloured sequence. The sequence is obvious to those with normal colour vision, but those with colour defects make characteristic errors in arranging the chips. Contrast can be tested by presenting images of reducing contrast to test when two colours become

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[3] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.211-243, Appendix 2 For a more complete description of the workings of the eye, see chapter 2

[4] Ibid., p.51. For example, the majority of patients with a colour defect of red see it less brightly or more brown than is perceived by a normal individual.

indistinguishable.[5] If contrast is poor, it is difficult to identify images, and therefore objects in cases, and text from its background.[6]

Whilst only a small percentage of the population are 'colour-blind', and it does not come under the DDA definition of 'disability', it is something which museums need to consider when making 'reasonable' improvements to the presentation of their buildings and displays to achieve the aim of being 'fully accessible'. However, there is no British Standard level of contrast to determine which colours are most suitable to use or a 'British Standard Blind Person' to assess the best provisions, but there is research being conducted into the area of contrast which museums could benefit from, as will be indicated in this chapter.

ADVICE ON COLOUR

The RNIB offers general recommendations on the use of colour and contrast in a domestic setting, but the principles can mostly be appropriated to museums and galleries.[7] On designing a room, the RNIB suggests choosing colours for the larger areas of the floor, walls and ceilings first and then working on contrast of smaller elements.[8] Matt paint is advised to avoid glare and subtle patterning can be used; elaborate patterning would cause confusion in discerning what the surface was.[9] Light colours can be used, but the RNIB warns against white as this causes glare.

The ADAPT Trust launched the *Open Sesame - The Magic of Access* programme in 1999 and has promoted this with a CD-ROM and programme of seminars across Britain. This advises colour schemes using

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[5] E. Rosen & W. Rosen, *Ophthalmology*, 1997, p.47. Such information is invaluable in assessing natural, visual disabilities, eg corneal scars and cataracts.
[6] Ibid., p.46. Loss of the contrast of an image is also a potential consequence of some refractive procedures, for example, photo-refractive keratectomy.
[7] RNIB, *See for Yourself leaflets nos. 1 - 4*, London, 1999
[8] RNIB, *See for Yourself 4: At home, How to make changes at home to see things more easily*, 1999, p.5
[9] Ibid., p.4

contrast throughout the building and matt finishes.

In Scotland itself, the NMS have produced *Designing Exhibitions to Include People with Disabilities, A Practical Guide* by Gail Nolan, which includes information on colour and contrast. The advice here is to use tone and even subtle patterns to create contrast between the floor, wall, ceiling, doors and their furniture, free-standing objects such as display cases and any potential hazards, for example, shelves, edges of alcoves, pillars or columns. It does warn against the use of elaborately patterned surfaces as these can be disorientating.[10] The application of different tones of the same colour within a room can also be effective, provided that the tones are so positioned as to keep the maximum contrast between each area of the room.

Project Rainbow is perhaps the most significant work done on colour and contrast and was conducted by the University of Reading. Project Rainbow was a two year research programme, completed in 1997, carried out at the University of Reading by Mr Keith Bright, Dr Geoffrey K. Cook (Department of Construction Management and Engineering) and Dr John Harris (Department of Psychology). The work was funded through the LINK Construction Maintenance and Refurbishment Programme (LINK CMR), with the support of the Joint Mobility Unit and ICI Paints.

The institutions assessed in the study were not informed of the research, so that 'normal' conditions could be assessed, but it is perhaps the most useful guide for colour combinations in exhibitions encountered so far, with more specific colour details than those offered by The ADAPT Trust and RNIB.[11] The descriptive details within the publication produced from Project Rainbow concentrate on technical terminology and provide details on every

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[10] G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide*, NMS, Edinburgh, 1997, Section 1 - General and Physical Access, subsection 1.7 - Exhibition Planning, p.5

[11] RNIB Access Audits use Project Rainbow information as standard now, but no-one appeared to have knowledge of the project when it was mentioned during this research

colour which could be used from the Dulux palettes for decoration. This can make use of the information somewhat complicated and perhaps the publication does not provide enough general room 'mock-ups' to give museums ideas. As such, The ADAPT Trust and RNIB guidelines may be easier to follow for the museum intending to make initial changes, but Project Rainbow provides the greatest body of information from which to choose the most suitable colour schemes.

The Project involved use of a questionnaire to establish a focus group of people with visual impairments for testing. This testing involved laboratory analysis of colour and luminance perception, what were termed as 'real world' tests, and group interviews. The aim was to establish five things: how visually impaired people navigate around a building; why they use buildings; how much colour and tone contrast visually impaired people perceive in normal lighting situations; what constitutes adequate colour and luminance contrast; and where this should be located. The aim was to perform research which would assist construction professionals in selecting colours for use in new and existing buildings and so help all potential building users, particularly visually impaired people, use buildings safely and effectively.[12] Prior to Project Rainbow, there was not a body of investigation into colour contrast based on research findings to assist designers.

The initial part of the programme was a questionnaire to establish a focus group, including questions on design practice.[13] It was important to have a focus group comprising people with a variety of visual impairments to assess the significance of colour and contrast as thoroughly as possible. The questionnaire discovered eighty different classifications of visual impairment and undoubtedly there are more. From six hundred and seventy six completed

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[12] K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, London, 1997, p.1 - 4. Project Rainbow claimed to be the first project to establish where colour contrast could be used to maximum effect for visually impaired people in a building.

[13] Ibid., p.2

questionnaires, forty people were selected to progress to the laboratory testing, and this is believed to be the largest group assembled for a study of this kind. The enormity of the response to the questionnaires also proved the validity of the study amongst people with visual impairments. Of the forty selected people, ten had loss of peripheral vision, ten had loss of central vision, ten had loss of vision in various areas of the visual-field and ten were fully-sighted people: none of them were 'colour-blind'. In the event, the final group numbered thirty-eight; two members of the fully-sighted group were discounted and a further member relocated to the group with various types of sight loss due to the similarity of results from members of the fully-sighted group.

The Project produced a written guide, *A Design Guide for the use of Colour and Contrast to improve the built environment for visually impaired people*, published by the University of Reading in 1997, and three palettes of paint colours produced by ICI. The guide made recommendations concerning colour and contrast combinations, using colours from the three paint palettes ICI produced, "Bright", "Muted", and "Clean". The Project Rainbow researchers were determined in their investigations to consider issues of aesthetics, with a desire to provide in their findings a system which would not necessitate colour clashes within the design of a room, but would provide as many good examples of colour contrast as possible. This would obviously depend upon the results of the testing.

The Natural Colour System (NCS), was chosen for Project Rainbow because it uses the six psychological colours, the chromatic red, green, yellow, and blue, and the achromatic black and white. All colour combinations formed from the project relate to the six colours. This is an easy system to communicate to architects and interior designers. Also market data trends over the last ten years were examined to assess which colours and combinations would form the basis of the contrast perception tests.[14]

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[14] K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, 1997, p.2

The laboratory tests in the project involved placing a 150mm square of one colour next to a 150mm square of another. These were viewed in a chamber and the participants were asked if they could clearly differentiate one colour from the other. The 'real world' tests followed with full-scale representations of rooms; participants were asked to walk round the room and find a designated object. A white room was used as a 'control'. The participants rated the rooms on a scale of 1 - 5 for the use of colour and the effectiveness of contrast. These results were compared to the results from the laboratory tests. The tests did not aim to discover how visually impaired people perceived colour but dealt more with the ability to define contrast, and whether this is brought about by the ability to see the contrast of the true colours, and how different visual impairments might distort this ability.[15] Light levels were also assessed within this research. Both the laboratory tests and the 'real-world' rooms were tested under light levels of approximately 100 lux, the level recommended for normal access areas, such as corridors, and so the level of light which colours would most commonly be viewed under. The lower light levels sometimes needed for some museum areas, therefore, will affect the perception of contrasts between colours and could affect the colour choice.[16] The colour samples in the palettes recommended by Project Rainbow are matt to minimise the reflection from the glass and lights already present in a building.

Three colour schemes were devised from the results of the project: monochromatic, contrasting, and adjacent harmony. In monochromatic, the same basic colour is used but different shades of it are put next to each other[17] All colours of the spectrum are encompassed in what is termed a colour wheel. Contrasting uses two monochromatic schemes, the two colours coming

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[15].K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, 1997, p.3

[16] See chapter 8

[17] K. Bright, G. Cook, J. Harris, *A Design Guide for the use of Colour and Contrast to improve the built environment for visually impaired people*, University of Reading, 1997, p.22

from opposite sides of the colour wheel.[18] Adjacent harmony uses two colours close together on the colour wheel but the most intense levels of the two colours are needed for this to work.[19]

The Project Rainbow 'real world' tests provided information regarding the navigation techniques used by visually impaired people when moving round a room. They also provided information regarding the "critical surfaces" for colour contrast, the surfaces most essential to orientate someone with limited sight in a room. In these tests, people looked up at the ceiling first but then looked lower down and about six feet in front of them. The scene is constantly scanned and contrast and shadow are used to measure distances and gauge how confidently to progress. The white control room in the 'real-world' tests did prove the importance of colour contrast in that many people refused to enter the room, the lack of contrast making the back wall appear to be actually very close to the volunteer. The other rooms, with different colours, seemed easier to negotiate, tonal contrast being constantly compared.

This information heightens the importance of contrast, including the colour of the ceiling. The contrast and luminance here can offer information about the length of the wall, where corners are and so on; the ceiling is usually used for this as it is the least cluttered area of a room although the nature of the lighting can limit its effective usage. Contrast only at ceiling level is not enough as the main navigation was proved to be done by assessing floor and wall contrast; it supplements but doesn't replace this. If different colours are used for different areas, it is important to maintain consistency between the choices, for example all corridor areas should use the same or very similar colours to help visually impaired people with very limited vision who would rely even more on colour difference as a means of navigation.

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[18].K. Bright, G. Cook, J. Harris, *A Design Guide for the use of Colour and Contrast to improve the built environment for visually impaired people*, University of Reading, 1997, p.24
[19] Ibid., p.51

Project Rainbow suggests that if a pattern is used, it must be subtle and the colour occupying the largest part of the pattern will be the colour visually impaired people will select to judge contrast.[20] It also reports that, as well as needing contrast at the floor and wall junction, colour contrast should be targeted at 1.2m above the floor for example by use of a hand or dadorail. As long as there is contrast at the floor/wall junction, there is no need to contrast wall/skirting level. The floor, as the walls and all other surfaces, should be plain and non-reflective.[21]

The advice of these publications was used to assess fieldwork findings. A similar approach is taken to that of chapter 6, with the different elements highlighted by the volunteers being dealt with individually, and comments regarding 'good practice' and 'bad practice' placed together within the sections.

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[20] K. Bright, G. Cook, J. Harris, *Colour, Contrast and Perception, Design Guidance for Internal Built Environments*, 1997, p.13

[21] K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, 1997, p.3

FIELDWORK

FLOORS

The majority of museums and galleries visited had floor surfaces which contrasted with the walls. Some also used different colours for surfaces in different areas, for example a different colour for each gallery, or different colours for galleries and the corridor areas. Museums which elicited comment, for both good and bad practice, are included below.

The Museum of Childhood has grey carpet in the downstairs gallery and an uneven black plastic flooring in the areas around the stairs. This was helpful to the volunteer as the change in texture as well as colour made them aware that they were in a different area and could expect to be somewhere other than in the same gallery. (see Figure 33) The Marischal Museum has different coloured floors in different rooms, so changes from room to room are obvious.

The gallery which exhibited "Into the New Age - Scottish Art 1945 - 1962" at the McManus Galleries used a grey carpeted floor and white walls, which was felt by the volunteer to provide adequate contrast. (Figure 42) The Crawford Arts Centre also has white walls and grey carpeted floors which were felt to provide sufficient contrast. The Stills Gallery and the Talbot Rice Gallery also have white walls and ceilings and grey floors, although the lower gallery at the Talbot Rice and the foyer of the Stills Gallery have wooden floors. The Collins Gallery again has the combination of a grey floor and white walls. Kelvingrove has wooden floors and pale wall colours, not necessarily white. Contrast was, again, felt to be adequate here. The gallery used for a display of works by Rodin during the visit to Aberdeen Art Gallery has a wooden floor and white walls and ceiling. The brown wood against the white was thought to provide adequate contrast.

Other Fife museums used wooden floors with white walls, including the St Andrews Preservation Trust, the Scottish Fisheries Museum, the Fife Folk Museum, the Crail Museum, the St Andrews Museum, and the British Golf Museum. These all had cases and objects along the walls so wall colour was not clearly evident as a means of navigation.

The McManus Galleries' Archaeology gallery has different floor levels but there is no warning in colour or texture to indicate the sloping connections between the levels. The darkness of the gallery itself makes it difficult to discern that the floor slopes in some areas.

The Marischal Museum galleries had cases around all their walls. The contrast was poor between the floor colour and the colour of the bottom of the cases so it was difficult to judge how close it was possible to stand to view the case contents clearly.

WALLS

Despite the opinions of the RNIB, the ADAPT Trust and Project Rainbow, no negative comments were passed by any of the visually impaired volunteers on the use of white for walls. The success or otherwise of colour contrast is assessed below.

The National Gallery of Scotland has good contrast between the floors and walls of the ground floor galleries. (Figure 45) The opulent red and green used provides a good contrast with each other and also with the wooden frames used for the artworks. The colours and nature of the fabrics are also designed to be reminiscent of the previous surroundings in which these paintings hung in earlier incarnations of galleries.[22]

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[22] See chapter 6 for brief discussion of the development of display.

The individual galleries in the Scottish National Portrait Gallery each use different colours for their walls and floors but all provided an adequate contrast according to the volunteers. The volunteers also felt that the wooden skirting, which was discernible around all the galleries, also helped to differentiate between the floors and the walls. (Figure 46)

The Writers Museum uses different colour combinations of cream and brown for its walls and floors. However, the difference between the tones chosen are sufficient to provide good contrast, the walls verging on a yellow colour and the floor a dark brown. The floor also provides a good contrast with the black stairs and the pale brown wooden cases. (Figure 50)

The galleries used for the 'Big' exhibition at Perth Museum and Art Gallery have wooden floors and orange or green walls. All the galleries here have some form of different colour combination between floor and wall as if discerning different areas, and all contrasts are sufficient

The dark orange walls and brown floor used for the Murray Room at Aberdeen Art Gallery did not provide enough tonal contrast, according to the volunteer. The skirting boards are a darker brown than the floor and this helped with definition but the colour contrast was still felt poor by the volunteer.

In the Marischal Museum, the area around the archaeological collections is all a monochrome grey; consequently, navigation around the area is difficult.

The Animal Hall in the Royal Museum of Scotland has a medium blue carpet and a grey wall. The volunteer felt these colours were too close in tone. (Figure 43) The World in Our Hands gallery again has poor contrast using

very similar shades of grey for the floor, the walls and the pillars which run throughout the gallery.[23] (Figure 44)

Although not specifically commented upon, people who are 'colour-blind' might, however, have difficulties with navigating around galleries which use a red and green colour differentiation. This was used in the National Galleries of Scotland.

The Museum of Scotland is a relatively new building, and so had the benefit of the architects and designers being able to refer to disability awareness advice developed as a result of the DDA and subsequent consultation. However, the combination of disability awareness and museum aesthetics are in conflict and a choice of cream floors and walls throughout prevailed. The cream does present a 'bland' background for the exhibits but the volunteers felt that the contrast was simply insufficient for navigation around the museum and likened the experience to wading through a "butterscotch Angel Delight" (Figures 47, 48 and 49)

DOORS

A single door is really a composition of several sections, the architrave (sometimes called the door jamb around the door), the kick-plate (the area at the bottom of the door), the handle, and the finger-plate (area around the handle). The wall surrounding the door also forms a part of the visual picture. If a different colour were used for each part the area could look like a rainbow; if doors are a feature of a museum, colour contrast issues have to be employed with understanding.

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[23] From a meeting with designers of this gallery, it was ascertained that they were not aware of issues of colour contrast when this gallery was planned. It is difficult to find a colour to suit all objects but the designers can now appreciate that grey was a bad choice for these particular objects under the level of light in the gallery. If the gallery was to be designed now, it was intimated that they would definitely reconsidered the presentation of colour contrast. See Figure 66

The ADAPT Trust suggests that tonal contrast can be used in just some of the areas rather than each one. The research for Project Rainbow found that visually impaired people expect that a panel of colour in a large expanse of colour in a room is likely to be a door in a wall so contrast of individual areas on a door may not be as important as the basic change in colour between wall and door. Project Rainbow does suggest that if the only difference between the wall and door area involved a different colour being used for the architrave, it would make this look like a pipe and may cause confusion as to what is actually there. The architrave could be contrasted with the wall and the door; the architrave and door could, however be the same colour, and this was the expressed preference.[24] Project Rainbow also suggests that, if a door has 'panelling', the shadow created by these may be enough to discern the door from the wall without painting the wood: this would be very subtle, however, and was doubted as being sufficient by the volunteers.

The RNIB offers further advice that the shape of the handle can help visually impaired people distinguish it from the door, the different shape creating a distinctive shadowing on the door. The volunteers preferred the use of colour contrast, however. The RNIB also suggests that the handle can just have a strip stuck on it rather than being completely painted - therefore handles, if they are the same colour as the door at the moment, need not be completely replaced. As kick plates are located at the bottom of a door and most visually impaired people tend to focus on the floor when walking along, contrast of this area with the door can be important.[25] Most kickplates are made from metal to withstand pushing by shoes and wheelchairs so contrast is apparent.

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[24] K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, 1997, p.3

[25] RNIB, *See for Yourself 4: At home, How to make changes at home to see things more easily*, 1999, p.7

Figure 42 - The exhibition *Into the New Age - Scottish Art 1945 - 1962* at the McManus Galleries, Dundee, illustrating the contrast between the white walls and grey floor and the use of spotlights

Figure 43 - The Animal Hall gallery, at the Royal Museum of Scotland, Edinburgh, illustrating the low level of contrast between the walls and the floor, and also the reflection from the lighting on the steel protective barriers

Figure 44 - An example of a case in The World in Our Hands gallery at the Royal Museum of Scotland, Edinburgh, illustrating points of low level contrast between the case, the label matrix and the text

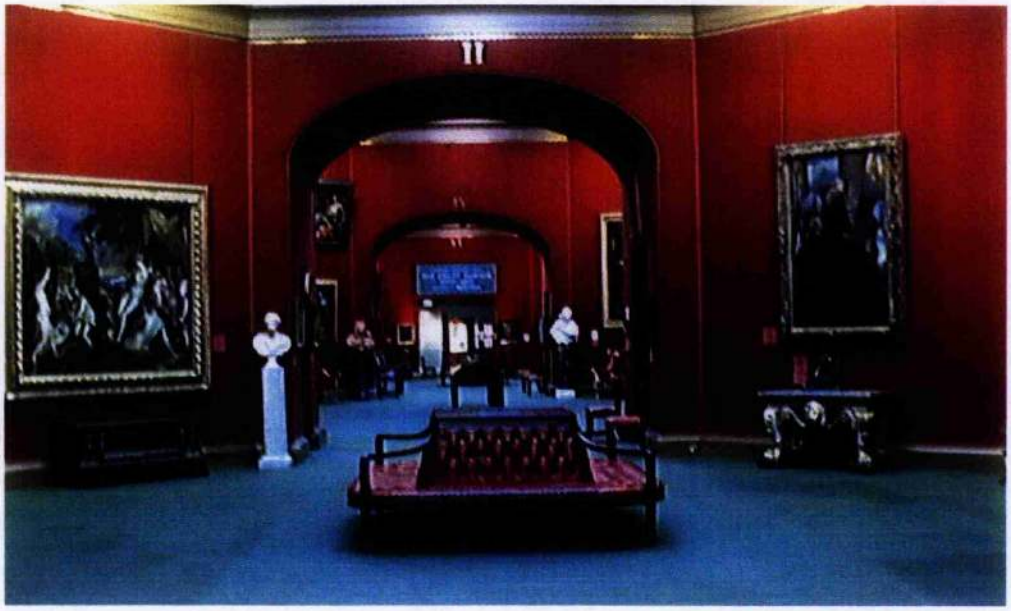

Figure 45 - Gallery II at the National Gallery of Scotland, Edinburgh, illustrating the contrast between the floor and the wall, and also the label matrix and the wall

Figure 46 - Three views of galleries at the Scottish National Portrait Gallery, Edinburgh, illustrating the contrasts between the walls, the floors, and the label matrices

Figure 47 - Three views of the KIngdom of Scots gallery in the Museum of Scotland, Edinburgh, illustrating various issues of contrast

Figure 48 - The medieval gallery at the Museum of Scotland, Edinburgh, illustrating issues of contrast

Figure 49 - The Kingdom of Scots gallery, at the Museum of Scotland, Edinburgh, illustrating issues of contrast

Figure 50 - The Robert Louis Stevenson gallery at The Writers' Museum, Edinburgh, illustrating the contrasts between the walls, the floor, and the cases

The RNIB also draws attention to door edging. If a door is open, the main contrast between the door and wall is lost. It is important in these cases, therefore, that the edge of the door strongly contrasts with the wall, otherwise the door could be walked into. It is much safer to keep the door either completely open against the wall or completely closed. A glass door is one option but if this is not provided with integral markings then it can be difficult to notice the door is actually there.[26]

Museums where doors were used between galleries are commented on below.

The Collins Gallery has a red door with a metal handle in the foyer, presenting good contrast. The entrance door to the gallery is wooden with a metal kick-plate and handles so there is good contrast here also.

The glass doors between galleries at the Aberdeen Art Gallery are always kept open and the volunteer commented that the edges of the clear glass were difficult to see against the wall as you approached and could easily be walked into.

Kelvingrove has dark wooden doors at the main entrance; the doors are in shadow and the handles are difficult to locate. There is an option of a revolving door alongside the normal door but the darkness of the approach area again hinders their usage.

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[26] See chapter 6 for comments on the use of glass.

STAIRS

One area which has almost as many parts as the door, is a step or staircase as a whole. The constituent parts include the area at the top and bottom of a staircase, the handrail, the riser which joins one step to the next, the tread which is where the foot is placed, and the nosing which is at the edge of the tread.[27] Project Rainbow, the RNIB,[28] and the ADAPT Trust all suggest providing a nosing which contrasts with the rest of the tread, a handrail which contrasts with the wall so it is easily visible, and that the area at the top and bottom of the stairs should differ in colour from the rest of the floor to suggest a change. The volunteers concurred with the need for a contrasting nosing; greater reliance is placed on the nosing when descending stairs and descent is more hazardous for a visually impaired person than ascent. If a building was covered by Listed status, the provision of colour contrast by museums was obviously restricted.

The volunteers expressed their views on negotiating the stairs at some of the museums and these are commented on below.

The Fergusson Gallery, Perth, has stairs which were quite easily navigable with brown carpeted treads and risers, and black nosings edged with metal. (The stairs have a handrail on one side and nothing on the opposing wall.) The stairs at the very top of the staircase in Perth Museum and Art Gallery are made of white/grey stone, with a white and brown checked nosing. These were passable as the contrast was only minimal, but the lower stairs which are covered with brown carpet and have metal nosings are much easier.

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[27] See chapter 6 for a more complete discussion of the purpose of these parts of the stairs.
[28] RNIB, *See for Yourself 4: At home, How to make changes at home to see things more easily*, 1999, p.6

The Crawford Arts Centre has beige carpet-covered risers and treads, and black nosings in a well-lit area so the contrast is easy to discern. St Andrews Museum has black nosings, this time on a medium blue carpet and the contrast was felt sufficient due to the paler tone of the blue, despite the proximity of the colours in the colour spectrum.

The Royal Museum of Scotland has stairs covered in blue carpet with grey nosings and yellow carpet with beige nosings; the contrast here was felt acceptable in the former case and passable in the latter. (Figure 51)

The White gallery in the Talbot Rice Gallery has steps with grey risers and treads, black nosings and two wooden handrails; a very good example. (Figure 52)

The Stills Gallery only has three steps from the foyer area into the gallery; all are wooden with risers and metal nosings, which is a good example of stair design.

At the Aberdeen Art Gallery, the nosings are not differentiated from the rest of the tread and the stairs are difficult to discern, being a dark grey in a dark area.

The McManus Galleries, Dundee, has dark brown stairs without contrast between any section of the stairs in the main staircase. In the alternative staircase, there is a contrast between the beige carpet covered risers and treads, and the black nosings. The lighting here was at a low level and so this contrast was still difficult to discern.[29] (Figure 53)

[29] See chapter 8 for more discussion of lighting levels

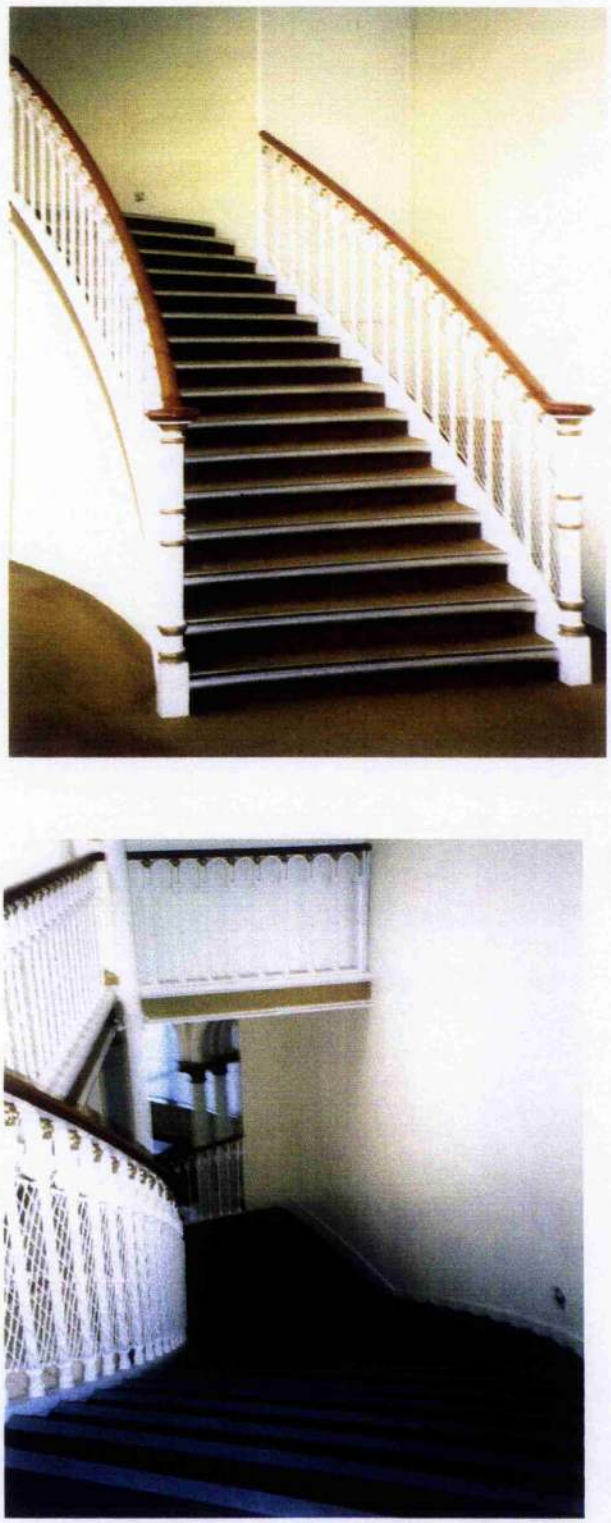

Figure 51 - The two staircases from the foyer to the first floor galleries at the Royal Museum of Scotland, Edinburgh

Figure 52 - The staircase between the upper and lower level of the White gallery at The Talbot Rice Gallery, Edinburgh, illustrating the use of contrasting nosings and handrail

Figure 53 - The staircase at the McManus Galleries, Dundee, illustrating low lighting affecting the levels of contrast

It is perhaps worth noting the comparison here between the monochrome nature of the external steps to most of the museums visited and the greater attention paid to stairs inside the museums. (External steps at St Andrews Museum, Kirkcaldy Museum and Art Gallery, Dunfermline Museum and Small Gallery were all monochrome. (Figure 54))

The Museum of Childhood has a stone spiral staircase to its top galleries and the stairs by the lift are covered in the black uneven plastic used for the landing area, with no differentiated nosings. (Figures 55 and 56)

The most difficult stairs found to negotiate were at the Museum of Scotland. There are various different types of stairs throughout the whole museum, either white stone or pale wood amidst the surrounding cream. The volunteer found the stairs he had to use between the foyer area and the first floor difficult to descend because there were no nosings and the colour of the stairs was the same as the floor and the wall. The final step of one flight of stairs also projects from the wall, and, being pale wood amongst beige could cause a hazardous obstruction. Instead of using a coloured nosing here, there is a little gap in the step to differentiate the nosing from the tread.[30] This was felt an unsatisfactory compromise as the gap was just wide enough for the tip of a white cane to become wedged in and potentially cause serious injury. Some stairs do have black discs at the edge of the treads which were passable to the volunteers as nosings but were not felt as satisfactory as a complete solid line. When the stairs do have risers, they are not in a contrasting colour and 'disappear' into the rest of the step, according to the volunteers.[31] (Figures 58 and 59)

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[30] For further discussion of this see comments on treads in chapter 6
[31] For further discussion of this see comments on risers in chapter 6

The Scottish National Portrait Gallery has green carpeted stairs with a brass bar at the junction of the tread and riser; this is visible on the ascent but provides no contrast on the descent (see Figure 40).

The Writers Museum, a Listed building, has no contrast anywhere on its stone stairs inside and outside. The spiral staircase to the basement galleries was also stone and unmarked and, as at the Perth Museum and Art Gallery, the irregular staircase style and lack of contrast could be hazardous. (Figure 60)

Figure 54 - The main entrance to the Kirkcaldy Museum and Art Gallery, illustrating undefined steps

Figure 55 - The spiral staircase between galleries at the Museum of Childhood, Edinburgh, illustrating the lack of contrast between the stairs

Figure 56 - The main staircase at the Museum of Childhood, Edinburgh, illustrating the raised black floor surface and the lack of ontrast between the stairs

Figure 57 - The main entrance of the building which houses The Talbot Rice Gallery, Edinburgh, illustrating the undefined steps

Figure 58 - An example of one staircase at the Museum of Scotland, Edinburgh, illustrating one style of nosing and the otherwise poor contrast

Figure 59 - The staircase between the foyer and basement galleries at the Museum of Scotland, Edinburgh, illustrating the difficulty to ascend and descend stairs without contrast ssues being addressed

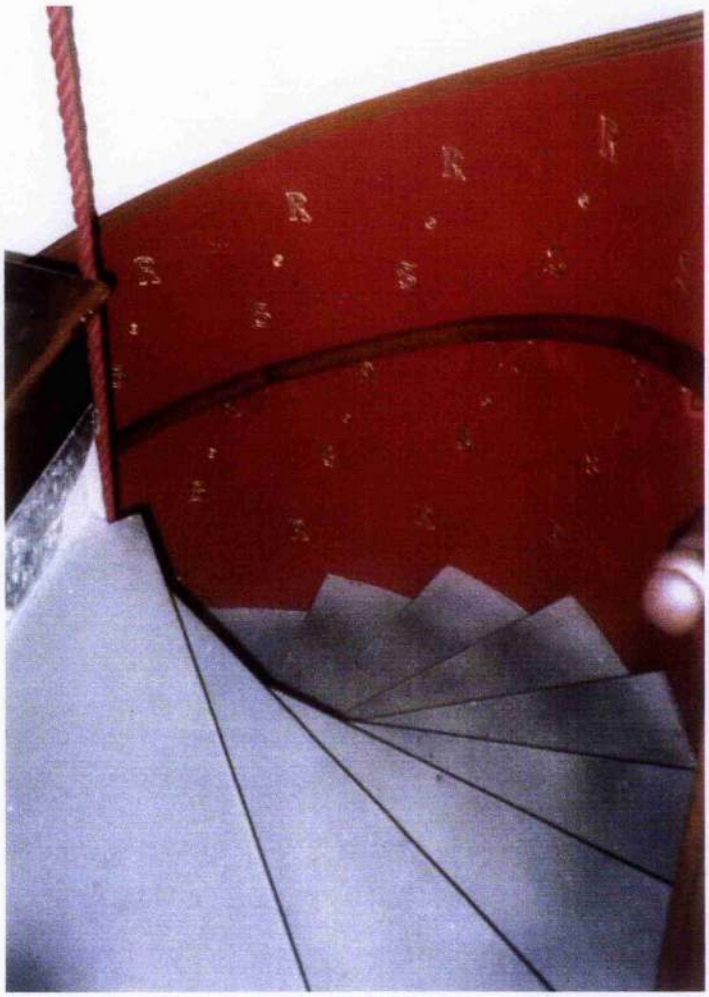

Figure 60 - The spiral staircase to the basement gallery at The Writers Museum, Edinburgh, illustrating the lack of contrast between the stairs

LIFTS

Few of the museums visited had lifts and the volunteers only used those found in the museums in Edinburgh. Lifts were encountered in the Museum of Scotland, the Museum of Childhood, the Scottish National Portrait Gallery, the Royal Museum of Scotland and the Talbot Rice Gallery.

The Talbot Rice Gallery has a grey door and a white architrave and the controls are silver outside and black inside which made them quite easy to locate.

The lift in the Museum of Scotland has a frosted white exterior amidst cream walls. The controls are silver inset into the beige surrounding walls and were difficult to locate for the volunteer.

The Museum of Childhood lift has metal doors in a white surrounding, and silver controls which became lost amidst the white wall.

Whilst the lift in the Royal Museum is easy to find against the wall, the controls are worn and are therefore difficult to read.

CASES

The opinions on the contrasts used concerning cases in the museums and galleries visited were variable. Not all museums and galleries visited consistently used display cases for exhibitions and only cases commented on by the volunteers are included. Some displays assessed were permanent and some temporary.

The Museum of Scotland's almost constant use of a beige background actually provided a good contrast in the majority of the cases according to the volunteer.

The Reptile gallery has dark animals against an orange background which the volunteers felt was quite a good contrast. (Figure 61)

The Museum of Childhood varies its backgrounds, using dark blue, yellow and bright blue downstairs and red upstairs. The objects here are all colourful so contrasted easily against the matt felt. (Figure 62) Black felt is used for coloured cars in Gallery 2 and 3.

The choice of bright colours in the Museum of Childhood was probably to give the impression of a fun childhood and the cluttered cases, the idea of a toy box, but the clutter, maybe even before the contrast, has a detrimental effect on identification.

All the cases in Perth Museum and Art Gallery contained a variety of objects and were quite full so the background did not noticeably obscure visibility of any of the pieces. However, as at the Museum of Childhood, the number of objects made discerning one from the other difficult for the volunteer, and the objects were of more similar colours than those at the Museum of Childhood.

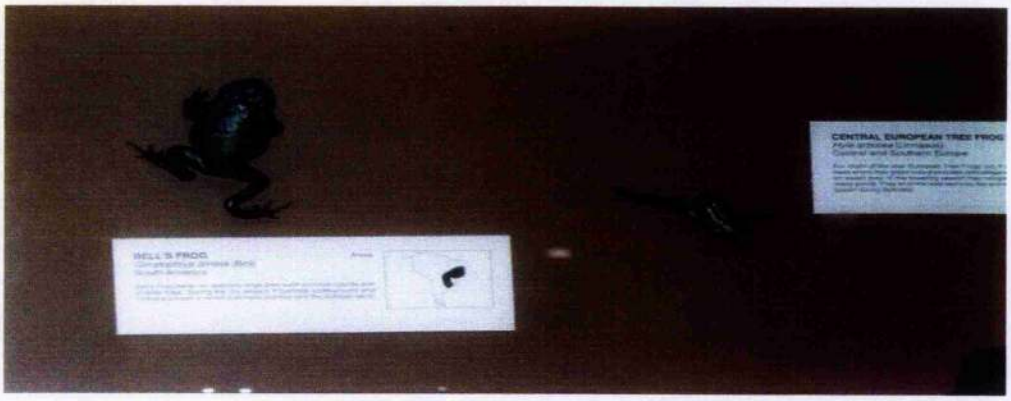

Figure 61 - An example of a display in the Reptiles gallery, Royal Museum of Scotland, Edinburgh, illustrating points of contrast between the exhibits, the case background and the label matrix

Figure 62 - Three examples of cases from Gallery 1, Museum of Childhood, Edinburgh, illustrating the use of bright colours in the cases and the contrast between the background and the objects

The beige background for the cases was complimented in the Museum of Scotland, but when black objects were displayed, however, the beige background was forsaken for a far less successful black. This background perhaps helped the aesthetics of the mining display but the effectiveness was diminished by the poor visibility of the objects. (see Figures 47, 48 and 49)

The Archaeology gallery in the McManus Galleries has a poor background and object contrast in its Egyptian section. One of the cases in the main gallery area contains pots which are a variety of brown colours against a brown crumpled background, so making definition even more difficult. This is perhaps another example of aesthetics coming ahead of visibility. Some of the cases have a blue background, but this is also crumpled causing difficulty in seeing the objects clearly despite the slightly improved contrast. The use of glass completely reaching the floor rather than standard cases with a coloured background proved problematic; the volunteer could not see the glass on the front of the Egyptian case in the Archaeology Gallery and almost walked into it.

The volunteer questioned the choice of background in a case in the Lil Neilsen display at Aberdeen Art Gallery; the objects are quite dark and a brighter background may be better. Perhaps aesthetic subtlety is being employed here, not wanting to draw attention from the objects. In the Applied Art display of silver, a similar subtlety is displayed using a silver background. From an aesthetic consideration, these are perhaps examples of 'good practice', but visibility for people with visual impairments in both instances is difficult.

The Marischal Museum has some displays of Eskimo coats, which are a beige-brown colour, set against a white background. This is aesthetically suitable because it can be seen to represent snow, but the volunteer found it an uncomfortable background to see the coats against. The red Undergraduate Toga of Marischal College is displayed against a red

background and coins are displayed against green. If the background colours were exchanged it would make the display more visible as a whole.

One case in the Collectors Display at the Aberdeen Art Gallery had a poor background and was so large that the edge could not be taken in by the volunteer in one glance: the unmarked glass can be a problem to discern. A piece of horizontal wood incorporated into the design of the display case might help, especially for those with a limited field of vision.

The Royal Museum of Scotland Animal Hall has dark animals against a dark grey background so visibility of some of the animals was quite difficult for the volunteers.[32] (Figure 63)

On the visit to the Collins Gallery, objects were displayed on a grey floor without a warning barrier to prevent the pieces being walked on. This was a particular risk to all visitors as the objects only contrasted slightly with the floor.

FLOOR FURNITURE

Some of the museums visited had objects other than cases in their gallery spaces and, in some instances, the contrast between these objects and the floor proved insufficient to avoid collision.

The Crawford Arts Centre and Kirkcaldy Museum and Art Gallery had seats in their galleries which were either wooden against a grey floor or black against a wooden floor; contrast was acceptable in both instances. The Fergusson Gallery has black rimmed and legged chairs on a wooden floor which work satisfactorily.

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[32] The main difficulties here were caused by the lighting; see chapter 8

The Stills Gallery has a wooden bench on the grey floor and contrast between these colours was felt sufficient.

The Museum of Childhood has wooden framed chairs with grey/green upholstery in the landing area around the stairs, which are quite visible. (Figure 64) This latter type of chair is used in the gallery with a grey carpet, providing a more subtle but still acceptable contrast because of the brown wood frame.

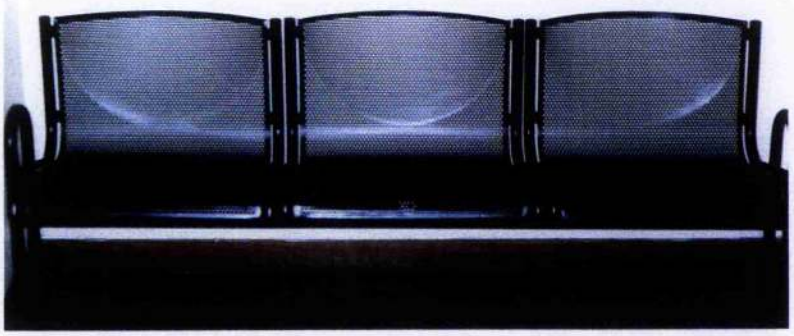
Kelvingrove's dark wood seats on a pale wood floor present an acceptable tonal contrast. This use of 'natural' colours worked well.

Apart from chairs, other objects were located within the galleries. In the Collectors' Displays gallery at the Marischal Museum, there are wooden cases which the volunteer felt contrasted reasonably well with the blue carpet. The gallery used for the "Big" exhibition at Perth Museum and Art Gallery in November 2000 had a grey humidifier on a wooden floor, which produced an acceptable contrast and enabled the humidifier to be avoided. The Collins Gallery presents a similar situation with a grey humidifier against a wooden floor,

In the Murray Room at Aberdeen Art Gallery, there are various chairs and dark wood plinths protruding from the walls. There was a suggestion by the volunteer in his tours of Aberdeen Art Gallery and Marischal Museum that strips of colour could be put around the edges of cases or humidifiers protruding out from the walls, and around the junctions of the floor and the walls. Perhaps these could be 'glow in the dark' for emergency situations. There were no examples of this in the museums and galleries visited and there could be some conservation issues to address.

Figure 63 - An example of a display in The Animal Hall, Royal Museum of Scotland, Edinburgh, illustrating the low level of contrast between the floor and the wall, and the problems of shadow and reflection caused by the lighting, particularly on the label and on the metal guard rail

(a)



(b)

Figure 64 (a)-(b) - Two sets of chairs at the Museum of Childhood, Edinburgh. (a) illustrates good contrast with the floor and (b) illustrates poor contrast

Some of the galleries in the Perth Museum and Art Gallery have wooden benches, some of which are on wooden floors which gave poor contrast. The Aberdeen Art Gallery had black seats against the wooden floor, which the volunteer felt could have been a brighter colour to assist in avoiding collision. The Museum of Childhood has black seats on the black uneven floor around the stairs which were difficult to distinguish for the volunteer, In the Museum of Scotland, the seats are pale wood against the cream which, whilst providing a tonal contrast, was still not felt sufficient by the volunteer (see Figure 48.)

The white tables and glass tables which were used for some of the applied art display at Aberdeen Art Gallery did not contrast well with the pale grey floor surface and could be walked into. The Collins Gallery presents similar contrast difficulties using grey steel cases against the grey floor and white walls. There are also off-white coloured heaters which protrude from white walls, which would also be difficult to negotiate. The grey humidifier used at the Fergusson Gallery contrasting against a similarly toned grey floor provides a similar difficulty.

SIGNS

CONTRAST TEXT AND MATRIX

Signs also employ colour, and contrast issues are just as important here.

Project Rainbow is being tested on signs to determine the acceptable levels of contrast in the concentrated area between text and sign matrix. The ADAPT Trust and the RNIB do feel that colour and contrast is important between the text and the background of the sign. This also extends

to the colour of the surface behind the sign.[33] *Designing Exhibitions to Include People with Disabilities, A Practical Guide* states that signs must be matt with 70% minimum contrast and employ good contrast on all the aforementioned fronts.[34] This research also warns against using colours which are alleged to be difficult for colour blind people to assimilate, particularly red and green. Dark type on pale backgrounds is preferred so long as there is sufficient contrast: the exhortation is not to use yellow type and to avoid pale type on coloured backgrounds, but sometimes type of this kind is legible for some visually impaired people.[35] The volunteer in Aberdeen did not find this too much of a problem but he had quite strong visual acuity which meant that the images he saw were not blurred by his sight difficulty and details were more easily seen.[36] Colour is only one of the important elements to a sign, and if the size of type, choice of font and position of sign are correct, perhaps a wider range of colours can be used.

The 'Big' display at the Perth Museum and Art Gallery had black text and the word 'Big' in red on a white label matrix, with a wooden background providing good strong contrast. The Fergusson Gallery uses a creamy background with black type on a wooden wall, where the contrast is again good. Fife museums almost uniformly use black text on a white background, which again provides for good legibility, dependent upon typeface.[37] .

The volunteer visiting the Marischal Museum did not find that the orange labels on an orange background in its archaeological display provided sufficient contrast and could not easily find the majority of the labels.

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[33] See chapter 9
[34] G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide,* 1997, p.4
[35] Ibid., p.9
[36] Reversed out text is defined as pale text on a dark background. For further details regarding reversed out text, see chapter 9
[37] See chapter 9 for more information regarding type-styles.

The Murray Room at Aberdeen Art Gallery also opted for label matrices the same colour as the walls. This made them hard to distinguish particularly as the colours were dark pink and dark orange in a dark area.[38]

In the Stills Gallery, white label matrices are sometimes employed against white walls which make it difficult to discern where the label is on the wall. The Talbot Rice Gallery uses black text on white panels, but, again, in a white background. The labels do not protrude and detract from the exhibits but they may go unnoticed as well. The National Gallery of Scotland also uses dark pink label matrices on dark pink walls, sometimes using white matrices to indicate which paintings have audio description. The white against the red walls is a good contrast, but the darker pink may cause labels to be missed.

Kirkcaldy Museum and Art Gallery occasionally use coloured matrices but these are a pale enough colour to still provide an acceptable contrast with the black text. There was a lack of standardisation in text design at this museum which could cause difficulty in reading labels for visually impaired people.[39] During a tour of the Archaeology gallery at McManus Galleries, Dundee, the volunteer found the black text on the blue label matrices a difficult tonal contrast.

Colours other than black were used for text on a white background - blue and orange were used for the "Into the New Age - Scottish Art 1945-1962" exhibition at the McManus Galleries. The volunteer felt black would have been better than blue despite the dark blue providing a similar contrast. The orange was felt to be too pale. This highlights the importance of using the correct intensity of the colours if using contrasting colour schemes, as described by Project Rainbow.

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[38] For reasons regarding lighting, see chapter 8

[39] See chapter 9 for further discussion on issues of standardising text

SYMBOLS

Sometimes colour is used as indication of a service, for example different audio tours at the Royal Museum of Scotland.[40] The Soundalive tours were differentiated by red circles and blue triangles but these were so worn that they were hardly legible or visible, despite the white contrasting surroundings.

The Museum of Childhood use a red hand symbol on a pink touch box to say the objects can be touched. (Figure 65) Apart from the lack of contrast, red seems an odd colour to choose because in a childhood environment it is usually taught to mean danger.

The Museum of Scotland chose blue, green and orange for symbols on labels indicating audio description of an item. These symbols were felt to be too small by the volunteer, there was enough space on the label to make them larger and they were not in the same place or order on any two. The colours chosen, especially blue and green, were lamented as poor for colour-blind people. The volunteers questioned whether the symbols could not be a colour and a shape? This could also work for large versions of labels outside the cases with coloured shapes next to the object as a key; the same colour could even be used as long as the shape is distinct.

REVERSED-OUT TEXT

There were few instances of pale type on a dark background but one was encountered in the Animal Hall at the Royal Museum of Scotland. This was declared illegible by two volunteers, and was not helped by its remote position in the case. This gallery contained a panel of a similar style. As well as the colours, the size was poor, positioned as it is in the middle of a large wall. White text was used on blue and red backgrounds in the World in Our Hands

[40] See chapter 11 for audio description

gallery at the Royal Museum of Scotland. Some red on blue was also used, which the volunteer found hard to read. (Figure 66)

The Writers Museum use white text on a black background in one of its cases, the text also reflecting in the case to create a very blurred picture. (Figure 67)

Perth Museum and Art Gallery use white text on a dark green or black in its Strathean glass display. The text is small and in italics and actually very difficult to read for someone without any form of visual impairment. There is also text on a background of glass, in the 'Silver' gallery and the 'Time of Our Lives' gallery, which is very difficult to distinguish.

In the 'Time of Our Lives' gallery there is also a large label with red text on a black matrix, a combination the volunteer had found impossible to distinguish. This gallery also has a large panel using a green and white photographic image as background to black text. The background makes the text very difficult to distinguish.

Perhaps one of the outstanding examples of poor labelling found during the fieldwork for colour contrast, reflection and maintenance is at the Museum of Childhood. The notice-board to the right of gallery 1 has very poor contrast and several colours are used. White, yellow, red, green and blue and black are used on a shiny grey background. Some of these sticky letters have been picked off and the chairs in front of the board mean people could sit down and block the information altogether. It was alleged by staff that the labelling had not been addressed for several years.

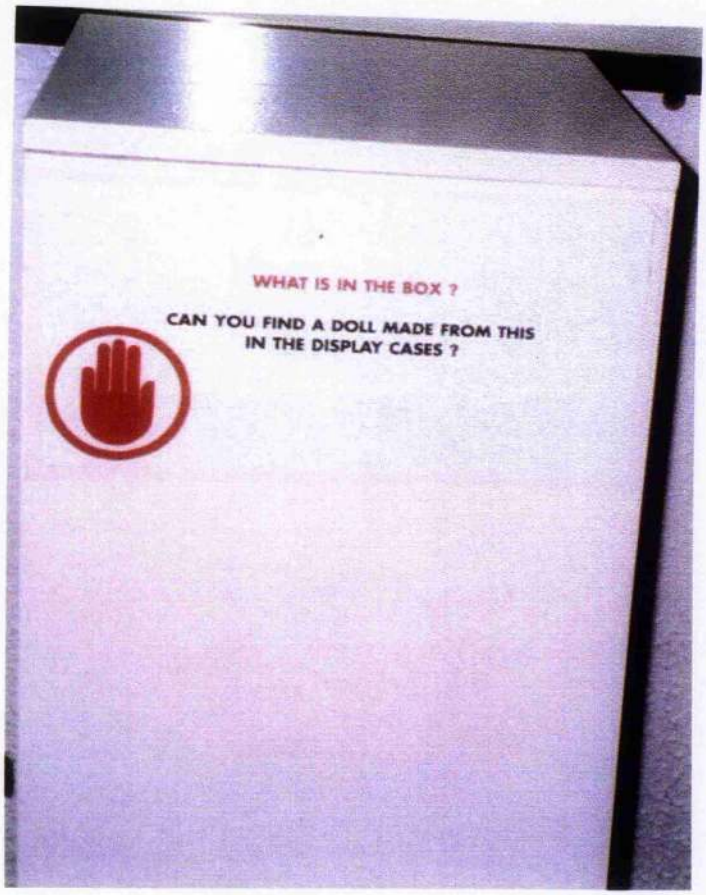

Figure 65 - A label using red text to encourage the use of touch in the Museum of Childhood, Edinburgh

Figure 66 - Five of the interactives in The World in Our Hands gallery, Royal Museum of Scotland, Edinburgh

Figure 67 - A case in The Writers Museum, Edinburgh, illustrating difficulties caused by reflection

CONCLUSION

Whilst major structural changes do not have to be made to buildings which are bound to comply with the DDA stipulations until 2004, some issues regarding building design could be seen to fall under the stipulations of Part III.

Colour contrast is one such issue, particularly with reference, for example, to the presentation of labels, and backgrounds within exhibition cases. This chapter explains that all the elements indicated in the preceding chapter are of relevance to people with visual impairments as much as for the colour definition used as for their architectural style.

Exhibition labels and the marketing of individual exhibitions, for example catalogues and posters, change with every new display, so, to employ the issues of colour contrast as described within this chapter should not cause great difficulty. Issues of aesthetics can play as much part here as in the exhibition area itself.

The information gained from the volunteers during this research clearly illustrates that colour schemes within buildings or exhibitions do not have to present gaudy contrasts and drastic clashes of colour. Different tones of the same colour could be used within the same room provided that the tones were significantly different, a very light blue placed next to a dark blue, for example. This fact indicates that aesthetics can still be applied in exhibition design if used sensibly; if brown is to be used as a background for earth-coloured pottery, so long as the two shades are quite different, authenticity can be maintained. It is the appreciation of such points which is important in the use of colour in exhibition and building design. Different levels of visual impairment enable different amounts of colours used for certain areas to be seen but, if a colour change can be discerned between two juxtaposing elements within an

exhibition or within a room, the appreciation of the display and the enjoyment of the visit can be greatly enhanced.

Advice is available concerning issues of this nature from organisations such as Project Rainbow, the work of other bodies such as the RNIB and the ADAPT Trust, and the possibility of contacting visually impaired people themselves to advise on appropriate colour choice. The NMS Guidelines are also a useful reference guide for simple changes which can be made to the use of colour in museum presentation.

Chapter 8

LIGHTING

Good practice in lighting design for visually impaired and fully sighted people requires the satisfaction of an extensive range of design criteria.[1]

Enhancing the light levels around an object or in a gallery can improve visibility for people with visual impairments. What exactly adequate lighting is for a visually impaired person, however, and indeed for a sighted person, is difficult to determine, because everyone and every visual impairment is different, and there is not an extensive pool of literature on the subject to assist designers.[2] Whereas, in the home, the most suitable lighting conditions can be found for the individual, for the museum and gallery, catering for a larger audience, the situation is more complex.

Guidelines produced by the ADAPT Trust indicate clearly the importance of lighting. Eight points are made in total about facilities for visually impaired people and three concern lighting. Visually impaired people require between 25 - 50% higher light levels than the majority of lighting available in buildings, according to the ADAPT Trust. Museums will have further provisos placed on their light levels due to the necessity in many exhibitions of conservation requirements. The difficulties of glare and reflection caused by poor positioning of lights in relation to glass cases are highlighted and emergency lighting levels are also criticised for being set too low.[3]

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[1] K. Bright, G. Cook, J. Harris, *Colour, Contrast and Perception, Design Guidance for Internal Built Environments*, 1997, p.12 Whilst, unfortunately, there is little specific lighting design guidance...consideration...would allow for the effective use of colour and luminance contrast in building interiors...

[2] W. Allen, "Making Light Work", *Museum Practice*, issue 4, vol.2, no.1, London, 1997, p.10

[3] C. Wycliffe Noble, *Open Sesame - The Magic of Access, Designing Access for Disabled People*, 1999, p.26

Lighting is essential for safe navigation around a building and can aid definition of changes in floor level and the edges of walls and ceilings, which are all useful clues of size and direction for visually impaired people.[4] The positioning of lights is also important to consider when designing a new museum or designing an exhibition in a current space. Shadowing, glare and reflection can affect the appreciation of a display, or the ability to find the way around a building.[5]

Several different types of buildings were visited during the course of Project Rainbow and the interior lighting conditions assessed in relation to colour contrast.[6] The comments in the printed results of the research relate to typical lighting regimes found in many of these places, mostly fluorescent and incandescent lamps.[7] The effectiveness of colour contrast , and tonal contrasts in particular, will be affected if the light in the area is inadequate. The ability to discern colour will deteriorate for fully sighted people when light levels are 30 lux. The typical average luminance values in public access buildings varies between 100 and 200 lux. The measurement of lux is assessed against square meterage; the levels of between 100 and 200 lux per square metre is therefore assessed as adequate for day-to-day navigation of a building. Lower light levels may be necessary within certain museum exhibitions for conservation reasons and museums need to consider access issues very carefully in these areas regarding the ability to discern colour contrast within the gallery.

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[4] G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide*, 1997, p.11

[5] K. Bright, G. Cook, J. Harris, "Project Rainbow, Colour and contrast design guidance", *Access by Design*, Issue 72, p.3 .

[6] K. Bright, G. Cook, J. Harris, *Colour, Contrast and Perception, Design Guidance for Internal Built Environments,* p.10. As well as causing colour bleaching, different artificial lights can alter the appearance of colours. Incandescent lamps may emphasise colours containing red, as well as producing point sources of light and possibly causing the same type of glare as spotlights. Fluorescent lamps may emphasise colours containing blue as well as causing glare if the fluorescent tubes are exposed. They do not give the same intense pool of light as a spotlight due to their larger size. Tungsten halogen display lamps can enhance colours also but provide a more even distribution of light See also G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide*, 1997, p.9 - 11

[7] Ibid., p.9

To assist ease of access for visually impaired people, it is best to aim for uniformity in lighting, with no extreme changes from bright to dark. If a darker gallery is necessary for conservation reasons, it is easier for all visitors if this is not placed next to a bright area; sighted and visually impaired people alike can become dazzled and eyes take longer to adjust to a change in light levels inside a building than when the change occurs due to the fluctuation of sun and cloud outside.[8] Should such a change be necessary, it is easier to have a small "transition area", an area between a dark gallery and a bright one which has a light level between the two, or to place the particularly darker gallery after several progressively darker ones. If it is impossible to avoid placing two such galleries together, a warning notice should be placed at the junction between the two to warn of the impending change. It is just as important not to make the contrast extreme between the inside and outside of a museum or gallery, although this can be difficult due to the unpredictable nature of the sun and cloud movement.[9]

STYLE OF LIGHTS

There are various types of lights which can be used in museums and galleries, including daylight. Daylight can be simulated by the use of blue daylight bulbs; these are expensive but do present a more natural light for people looking at objects or moving around a building. Fluorescent bulbs are convenient because they last longer, and emit five times the amount of light than ordinary bulbs of the same wattage. The tube-style bulbs provide a more even spread of light of the smaller size of bulb used for other types of lights. Filament bulbs in frosted or white glass will create softer shadows than those

[8] G. Thomson, *The Museum Environment*, London, 1986, 2nd edition, p.26. A condition such as photophobia can affect this.

[9] G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide*, 1997, p.11. See also C. Wycliffe Noble, *Open Sesame - The Magic of Access, Designing Access for Disabled People* , 1999; p.26 and D. Wilson, *A Regional Resource Centre for Deaf-Blind Persons*, Degree of Bachelor of Architecture (Hons), University of Dundee. 1987-1988. This includes comments that roof overhangs can be used to help the transition from the light levels outside to those inside a building.

with plain glass.[10] Halogen lights are very bright and cover an intense area.[11] The types of bulbs used can be affected by conservation issues and the location of lights can be governed by this also but ease of navigation around the building has to be balanced with this concern.

NATURAL LIGHT

Daylight will present a more natural appearance to colours but the area of light produced depends on the size and position of windows. Use of daylight will normally need to be combined with artificial light as daylight alone can be unpredictable. One method to control the level of light in a dual lit area is to provide a mechanism where an attendant or a motorised control can operate blinds or artificial light when a light measure such as a photocell receptor gives a low or high light level reading.[12] Daylight can produce problems of complex shadowing and glare, depending upon the strength of the sun. If the windows are high up in the ceiling and the object is unglazed, the glare will be very minimal.[13] It is hard to reproduce natural lighting by artificial light;[14] daylight tubes can be used to provide an even light but the whiter light cannot be used in cases if there are specific conservation measures. It is important to keep the windows clean if relying on daylight and the light source *has* to be in front of the object. Sometimes shadow is appropriate for ambiance but it should be used with care and the surrounding area should be well-lit. The shape of windows can also affect the size and shape of shadows. Daylight can be recommended as it is the easiest form of light for eyes to adapt to, but it is dependent on the method of its provision for its success within a museum.

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[10] RNIB, *See for Yourself 3: Lighting, How to use better lighting to make things easier to see*,1999 p.9
[11] Ibid., p.11
[12] G. Thomson, *The Museum Environment*, 1986, p.29
[13] K. Bright, G. Cook, J. Harris, *Colour, Contrast and Perception, Design Guidance for Internal Built Environments*, 1997, p.11
[14] Ibid., p.11

Windows can also be a source of difficulty in lighting. If there is a need to block out the light source, blinds or similar will have to be used in the cases of historic buildings.[15] Windows can help provide a natural light source, but the moving images presented through those below ceiling level and the changing levels of light through them can cause confusion for people with visual impairments.[16]

SPOTLIGHTING

Spotlights can give intense pools of light thereby enabling that on which they shine to be clearly visible. However, the area around the beam of light is significantly darker so making the rest of the object, or whatever is being illuminated, difficult to see properly as a whole.[17] Glare can be caused by this type of light as an intense pool of light on a shiny surface can bounce back at the viewer and obscure the piece.[18] Difficulties of this nature can be assisted by putting diffusers across the light source to disseminate the light over a wider area but sometimes this can affect the visibility of what exactly the light is illuminate in terms of definition.[19] Spotlights over the top of paintings do not light all the picture so do not enhance the work for a visitor. A balance has to be reached in some way because if the difference between the light on the object and the surrounding area is too great, navigation towards the piece may become difficult for a visually impaired visitor. Spotlights also cause light to bounce off surfaces and can particularly affect colour definition; if the light is shining on a pale colour it can cause the area to appear 'bleached', thereby creating a false impression of the object or can make navigation of lateral circulation routes difficult.[20]

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[15] G. Thomson, *The Museum Environment*, 1986, p.33
[16] Ibid., p.26
[17] Ibid., p.27
[18] Ibid., p.28
[19] Ibid., p.27
[20] K. Bright, G. Cook, J. Harris, *Colour, Contrast and Perception, Design Guidance for Internal Built Environments*, 1997, p.9

Conservation can dictate the level of light for the objects but it does not need to dictate the lighting on the labels and information panels. More spotlights can be used here and just one over the exhibit they describe, for example, to minimise problems of direct light and also to enhance navigation. If areas need an extra light to be visible but, for conservation reasons, such provision is difficult, a switch, which can be turned on by a visitor and set on a timer, can provide the same intensity of light as a spotlight but not the same intensity of damage. Spotlights can be used to reduce overall light levels for conservation reasons but are not always successful for navigation reasons.

POSITIONING OF ARTIFICIAL LIGHTING

The positioning of lights is highlighted at the start of the chapter. As well as assisting navigation and visibility of objects, the positioning of lights can assist other important functions in a museum. "Back-lighting" can be employed to great effect in these instances. Positioning lights behind where museum warders sit or stand can ensure that they are not obscured from the view of visually impaired visitors by the glare from lights trained upon them. Emergency signs should also be back-lit to ensure there is no glare or reflection on this essential information. If interactives are used, spotlights should not be placed so that they shine directly on to the screen.[21] Back-lighting may not be so appropriate in this circumstance, therefore spotlights or other lighting used needs to be positioned with care.

When back-lighting is used, it can still be difficult to avoid shadows forming over the objects when people stand to look at them; tests should be completed concerning this circumstance for wheelchair users as well as for ambulant people.[22] Lights in the floor can be quite difficult to negotiate as they

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[21] G. Nolan, *Designing Exhibitions to Include People with Disabilities, A Practical Guide*, 1997, p.11
[22] Ibid. p.11

are shining directly into the face of visually impaired people particularly, who often look downwards in order to navigate.

REFLECTION

One way to prevent reflection is to light cases from the inside and have high central lights in the room. Another way to ensure that there is minimal reflection is to use non-reflecting glass or film on interactives, cases, displays and paintings: these however can also affect the appearance of the colour of the objects.

FIELDWORK

Several of the elements described above were experienced in the museums visited. The following are observations made by the volunteers of both a positive and negative nature, set within the relevant headings..

NATURAL LIGHTING

Kirkcaldy Museum and Art Gallery was able to make use of natural light which assisted navigation of the building and reading of the labels. Some natural light comes into the Rodin Gallery at Aberdeen Art Gallery and some enters near the ceiling in the Murray Room. This is lit as well and therefore does not get noticeably darker in the evening when natural light will disappear. In the balcony area a difference is noticed as the area of entry for natural light is much larger; this does however negate some of the reflection from the other lights during the day. Some of the engraved stones in the Archaeology Gallery have been positioned to make use of natural light with a window behind them. Whilst this does not give reflection, the moving images in the background can be confusing.

The Marischal Museum is the only place where daylight tubes for lights were encountered. These do seem to produce a much whiter light and give a more realistic impression of colours, as natural daylight would. They are used for text panels not objects and present even lighting over the area..

ARTIFICIAL LIGHT

The Fergusson Gallery uses fluorescent tube lights so the galleries are more evenly lit at a reasonable level.

Sometimes a solution to the lighting versus conservation debate can be found in temporary lighting. Perth Museum and Art Gallery operated a system in some cases in the Time of Our Lives gallery where a button can be pressed to light up the case for a set period of time to enable objects to be viewed but the light was not constantly set at a damaging level for conservation. It is important that the buttons are visible and instructions clearly marked in these instances.

During the "Into the New Age - Scottish Art 1945 - 1962" exhibition at the McManus Galleries, two images were placed over light boxes and this removed the problem of reflections. This type of lighting is dependent on conservation issues with the type of image to be lit in this way. The gallery had a high level of light in general from the spotlights and some natural light, which helped navigation round the building.(see Figure 42)

The Collins Gallery uses spotlighting for the labels which has varying degrees of success depending on the whether the label is laminate or covered with perspex. Spotlights can cause reflection off these surfaces and prevent visibility of the text. In Kelvingrove and the Gallery of Modern Art the lights are high up in the ceiling and so the reflection and uneven lighting on objects was not as problematic during the visit. Both institutions benefited from the addition of natural light, which helped to diminish the potential difficulties with spotlights.

The Carnivores and Reptiles gallery in the Royal Museum has a high level of lighting from fluorescent lights and a broad area of natural light. The reflections in the glass are less obvious here due to this high level of light and the fact that the cases are large and can dissipate the effect of the reflected light on the visibility of the images.

LOW LIGHTING

Conservation, as already stated above, had a part to play in dictating light levels. Low lighting in the terms of this research was a sign of 'bad practice' to visually impaired visitors, although the volunteers appreciated the need for this once it was explained to them. For example, the volunteer found the contrast between the Murray Room and the gallery preceding it difficult to adjust to at the Aberdeen Art Gallery. Conservation was the reason for the low level lighting here. The volunteer experienced similar difficulties in the Collectors' Displays area at the Marischal Museum, although conservation did not seem to be the reason for this as the cases were well-lit. The darker exterior area made the contrast stronger with the well-lit cases and labels, so potentially made things easier to see, but it did make navigation of the gallery more difficult: if all concentration is needed for putting one foot in front of the other then relaxation and appreciation of the objects is hard to achieve. Some of the areas and graphics are more brightly lit, with three spotlights across the top of the latter rather than one, but the effect was, on occasion, dazzling, and created more pools of light across the floor, which increased the problems of negotiation between light and dark areas.

The Archaeology gallery at the McManus Galleries, Dundee, has a dark corridor at its entrance and then a dark area filled with Egyptian objects. This space has a very large glass case which reaches to the floor and, because of the darkness, it was hard for the volunteer to tell that this was a case and he almost walked into the glass. The problem of large expanses of glass was highlighted in the colour section but the lack of light heightens the problem. The volunteer became completely disorientated here and couldn't find his way out of the area for a while without assistance. Every time the light changes around them, people with visual impairments have to stop and "refocus". There are some objects on open display here and the low light level means that some of these pieces could be walked into with the possibility of damage, or could

cause injury to the visitors. The lower light levels are also appropriate to present a feeling of being underground in the archaeology displays but sometimes the aesthetics of a display in this case do not provide the best opportunity for access by people with visual impairments.

The low lighting in the World in our Hands gallery affects legibility of the interactive instructions and indeed the interactives. The spotlighting here also affects the legibility of the panels, one light attached to the top of the panel cascading light down, and extra reflection provided by spotlights in the ceiling. There is text with a picture running through it in a dark gallery which was completely unreadable for the volunteers. Most of the objects here are dark so the low lighting is even more ineffective.

The Murray Room in the Aberdeen Art Gallery uses strip lighting so this created slightly less reflection than the spotlights. Conservation reasons were again cited here as a reason for low lighting.

SPOTLIGHTING

Aberdeen Art Gallery has some similar problems to the "Into the Age" exhibition at the McManus Galleries in that spotlights in the ceiling are used so some of the paintings are hindered by reflections. Reflection was particularly a problem in the "Into the New Age - Scottish Art 1945-1962" exhibition: several of the works were quite dark so all that could be seen were the reflections of the spotlights. The volunteer described the paintings as covered by a 'star scene' of lights, particularly those which had the length of the room reflected in them. Eyes are drawn straight to the lights rather than taking in the image and this reduces the appreciation. The sign for the Murray Room in the Aberdeen Art Gallery is made of brass and the lighting used caused reflections on this although the surface was not overly shiny. The Balcony area again uses spotlighting above the paintings which provides patchy coverage.

Perth Museum and Art Gallery has spotlit galleries in the majority of areas and lighting the cases from above produces an uneven spread of light by which to appreciate the objects. The Writers Museum had a 'good' example of lights reflecting on a display case where the problems can be clearly seen by an extra representation of the label in the case (see Figure 67). The information board at the entrance to gallery 1 in the Museum of Childhood is poorly lit and therefore difficult to read

There are some problems with spotlighting in the Animal Hall at the Royal Museum of Scotland, as well as the World in Our Hands gallery where the Panda is in such darkness that the volunteer missed it initially. Some of the animals have spotlights underneath them which means that all that can be seen is a blob of light. The resultant shadows makes establishment of the outline of the animals' heads difficult. There is a shiny silver rail around the groups of animals which shines dazzlingly in the spotlights and also to prevent visitors touching. This dazzling from the rail also affects the visibility of the labels. The two cases in this gallery are spotlit and the resultant unevenness of the light means some of the darker objects particularly are difficult to see; the spotlights in the ceiling cause reflection in the case-glass also which affects visibility, particularly for wheelchair users because of the height of the reflection. There is the same problem with the one information panel.

The Royal Museum had problems of reflection on the World in Our Hands interactives.[23] The spotlights used in the dark gallery caused difficulties for the volunteers when trying to read the instructions and questions on the computer screens, and on the surrounding surfaces. Some of the interactives required buttons to be pressed to read the information necessary to use the facility. Again, the reflection of the spotlights made reading this information difficult: in some instances the lights within the interactives were not working rendering the facility inoperable.

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[23] See Figure 66

The Crawford Arts Centre relies upon spotlights which did cause reflection in cases and on the laminated labels. The St Andrews Museum and St Andrews Preservation Trust had intermittent problems with spotlights. The Scottish National Portrait Gallery uses gold strips on the stairs which have a reflection from the lights above, although daylight is used to some effect here, an element which is missing in the Animal Hall. (see Figure 39).

The Royal Museum of Scotland has a good example of the difficulties created by the transition from light to dark between two galleries To progress from the Animal Hall to the World in Our Hands gallery in the Royal Museum involves moving from a well-lit area to a much darker area, both in terms of lighting and of decoration, via the even more brightly lit entrance hall. Such a mixture of changes in lighting caused great difficulties for the volunteers: there was a reason for all the changes, the general lighting of the Animal Hall, the bright light in the entrance hall where it is important that everything can be seen, and the darker area of the World in Our Hands where the exhibits had specific conservation requirements and the gallery was about evolution. Natural progression to the next gallery, the Carnivores and Reptiles area, again involves a transition from dark to light. These displays were established many years ago but the curators of the World in Our Hands exhibition did have an appreciation of the current issues.

The volunteer had difficulty in adjusting between the bright Museum of Scotland entrance hall and the mediaeval gallery. The ramp from the Museum of Scotland entrance to the main admissions area again involves a progression from dark to light. (see Figure 22). The Kingdom of Scots galleries use various shades of beige for the walls, floor and ceiling and the darker light means that the definition is even harder to distinguish. The bottom step of the stairs from this floor up to the next level is difficult to see also, and the light above was particularly difficult to get used to because of the transition from the darkness below. The darkness also affects visibility of the interactives here.

MAINTENANCE

Basic repairs to lights were not completed in some instances and this affected the levels of 'bad practice'. In the Greek Vase area at the Marischal Museum, some of the light fittings used are not long enough therefore some of the objects are difficult to see. Sometimes shadow can be caused by poor maintenance as in the unreplaced bulb in the Murray Room at Aberdeen Art Gallery. There was also a dark area on the main staircase from the entrance to the first floor for a similar reason.

CONCLUSION

The provision of lighting within museums is one of those issues which in part does fall under the provisions of the DDA Part III, although the responsibility to make major changes is perhaps more relevant to the 2004 stipulations. Making lasting changes to the position and nature of the lighting may indeed be more appropriate to the final stage of the DDA, but consideration of the issues of using different types of lighting, and the positioning of lights within temporary exhibitions and exhibition spaces could be considered under the terms of DDA Part III. To ensure adequate lighting of labels within a temporary exhibition, for example, could be perceived as a practice which might need reassessment or alteration; policies, practices and procedures should be reviewed under the terms of Part III.

The fieldwork for issues of lighting illustrates that all the elements indicated in chapter 6 as of relevance to people with visual impairments and their appreciation of a museum visit are just as relevant for the way in which they are lit as for their architectural style. As such, provisions of appropriate lighting could actually assist museums in addressing the social exclusion of groups such as people with visual impairments. If museums try to make provisions to improve the quality of a visit, a new audience from a group which can feel excluded could be attracted.

Conservation issues obviously affect the level of lighting museums can provide in some galleries, but the illumination of labels, text panels, interactives, and the lighting of areas between galleries, would not be hindered by this stipulation. Improving the lighting of such interpretative aids to exhibitions and the corridors or other areas between galleries could be seen as a reasonable adjustment to enhance a visit for visually impaired visitors. The correct qualification as to whether this would classify as a Part III directive would depend upon how the lighting had to be positioned to make the improvement.

Various methods were used to light exhibitions in the museums visited. The volunteers on the whole found galleries with natural light as the sole source of illumination, or where natural light was used as part of the lighting source, the easiest to navigate as eyes adapt most easily to the type of light they are most used to. However, an architect cannot design accurately for the position of the sun and obviously the sun moves. To use natural light as the sole source of illumination would not be satisfactory and, in some respects artificial light presents a more consistent light to become accustomed to for visually impaired people. The selection of light should be based upon the need for colour recognition, conservation requirements and energy efficiency, and the need to see the objects.

To combat difficulties faced in finding a suitable level of lighting for people with visual impairments would be solved most easily by the production of a framework of rules.[24] However, combining the points made above into some form of fixed guidelines would be very difficult. A series of general advice points could be devised with a particular reference to making provisions for people with visual impairments and highlighting the difficulties of balancing this with other exhibition priorities, for example conservation and aesthetics of presentation. One point of advice should be to make clear to visitors why light levels might be set at the level they are. If the level is low for conservation, visitors should be instructed that this is the reason for the comparitive darkness.

Museum professionals should seek out any advisers who might be available to assist with this subject to enable them to present their exhibitions and the building itself in the most accessible way possible.[25]

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[24] G. Thomson, *The Museum Environment*, 1986, p.32
[25] W. Allen, "Making Light Work", *Museum Practice*, issue 4, vol.2, no.1, London, 1997, p.11

Chapter 9

TEXT

Intellectual access is as important as physical access for visually impaired people in a museum. The easiest way to convey information which might be appropriate for visually impaired people concerning the museum, its exhibitions and any facilities is through text. Exhibition labels, information panels, and advertising literature are all most easily accessible within a museum in the printed word.

For visually impaired people, text is not always the most appropriate method of communication, but there are various ways to improve accessibility to it. There are no universal standards for text design but there are useful principles to follow.[1] Textual information in a museum may not be read for several reasons, including the content of the description, the size of the type itself, the position of the label on the wall, and whether the gallery is light enough to enable the label to be located.[2] To these can be added issues of choice of font style, density of type, use of capitals and lower case, justification of the text, use of symbols, the colours used for the label matrix and the type.[3] In her book, *Exhibit Labels: An Interpretive Approach*, Beverley Serrel states that one of the ten deadly sins regarding labels is to allow a label to be let down by poor design, which includes type-size, font choice, lighting, and colours and materials used.[4]

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[1] Campaign for Museums and MA, *Designing a Label: Guidelines on Labelling for Museums*, London, 1999, p.1
[2] E. Kentley & R. Negus, *Writing on the Wall*, London, 1989, p.1
[3] A. Rayner, *Access in Mind*, Edinburgh, 1998, p.63
[4] B. Serrell, *Exhibit Labels: An Interpretive Approach*, London, 1996, p.234

The content of the written information should be aimed at an audience covering all facets of the community, including people with disabilities. Consultation should be a key component in developing intellectual interpretation of an exhibition.[5] It is not necessarily difficult or expensive to make alterations to the production of text to comply with the DDA Part III recommendations of adding auxiliary aids for people with disabilities.[6]

TYPE-SIZE AND FONTS

Production of text is the key to its visible accessibility. Text of uncomplicated design will catch the attention of visually impaired people and encourage them to try to read it. The RNIB suggest that the majority of visually impaired people can read large print. The RNIB define 'large print' as 16-point, and type of this size is visible to 95% of visually impaired people.[7] The type size, however, has to be dependent upon the font chosen.[8]

The text which you are reading at the moment is Helvetica 16-point and is suitable for labels.

However, the text you are now reading is the font Arial, in 16-point, and is too small to be used for museum text. It would need to be 20-point to be adequate.

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[5] The content of museum text, regarding its suitability of intellectual level, will not be discussed here. The volunteers did not comment on the label content, for example, and were more concerned with the ability to access the information rather than what the information actually was, unless there was an omission of information on advertising literature which they would have found helpful. Consultation was consistently declared the easiest way to achieve the best results.

[6] DDA Part III, Section 19

[7] For wall panels, a larger point size than 16 is useful, and a larger size than for the main text should be used for a title. RNIB, *See it Right*, Clear Print Guidelines, London, 1996

[8] B. Serrell, *Exhibit Labels: An Interpretive Approach*, 1996, p.197

Large print can be produced easily on computers by enlarging the font size. The size of the text on a label, for example, must be appropriate to enable the viewer to read it even if it is not possible to stand right up to the label, due, perhaps, to there being a barrier to protect the object. Type of size 16 point is also not obtrusively large for a label in an exhibition or advertising literature, and wall panels will commonly already use a larger font size to enable them to be seen from a distance to attract attention to an exhibition. A sans serif font, one without curls and edges, should be chosen, similar to Helvetica used for this text, so that the print does not distract from letter shapes.[9] The headings used throughout this thesis all use sans serif fonts with varying point sizes, none smaller than 12 point. The fonts clearly show that there are enough such variations available to make text accessible without continually using the same one or two fonts, and without using serif type.

Some exhibitions would use a font such as this, Olde English, if the subject matter were historical; even in 16-point, this text is very difficult to read, for sighted people as well as people with visual impairments, and it is extremely difficult at 12-point, or even 14-point.

Georgia is a serif font and the extra lines on the tops and bottoms of letters and curls on letters such as 'g' do not produce the same clarity, even at 16-point, as Helvetica does, where letters end clearly and 'g' looks like a written 'g'.

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[9] G. Nolan, *Designing Exhibitions to Include People with Disabilities - A Practical Guide*, 1997, p.10. Numbers '3', '5', '6', '8', '9', '0', and '&' can become difficult to determine in serif fonts. Helvetica is the sans serif font recommended by RNIB

Whether producing labels, catalogues or other information, the type density used should be a medium to bold weight for better definition, rather than a fine quality.[10]

TYPE-STYLE

Type should be in a mixture of upper and lower case which will give words their 'normal' shape and will make reading easier. Visually impaired people who have experienced decline in their sight in later life, for whatever reason, will have a visual memory of word and letter shapes; if they have a level of sight where text is still a possible medium for them to gain information, the use of upper and lower case will enable them to put this visual memory into practice. Words can be read with greater speed and flow when typed like this, THAN IF THEY ARE TYPED ALL IN UPPER CASE WHEN IT IS MUCH MORE DIFFICULT TO GUESS WHAT A WORD IS AS THERE IS GREATER UNIFORMITY OF SHAPE BETWEEN THEM.

Underlining, and likewise italics, should not be used as they interfere with the identification of words, detracting from their normal shape. These styles are mostly commonly used for titles and this important information can be lost if these methods are employed.

<u>It is difficult to determine letter shape when a line is underneath the text, particularly if the stem of the letter goes beneath the line.</u>

It is also difficult to determine letter shape if the words <u>are italicised as the</u> slope can cause confusion.

[10] E. Kentley & R. Negus, *Writing on the Wall*, 1989, p.14

Kentley and Negus state in the book, *Writing on the Wall:*

> If there is a vital point that must be stressed consider scrapping the rest of the text.[11]

The reason for using italics and underlining should be examined; if there is a particularly important piece of information, it could be emphasised by being put on a separate label to be used in addition to the main label for the object.

Text should be left justified only, enabling the eye to go back naturally to the start of the subsequent line and the spaces between words are not stretched. The text written here is justified, both left and right, and the difference in spacing between words and the difficulty with finding the beginning of the next line can be seen when compared with the following paragraph.

This text is left justified and the spaces between the words are natural. The words are not forced to the end of the line; if a word does not fit the remaining space, it is moved down to the next line, and the previous line is left with a gap at the end. This breaks up the text and makes it easier to read. For a large amount of text, this method might not look as aesthetically pleasing as the justified style. For museum labels, exhibition panels and advertising literature, the amount of text used should not be sufficient to cause this concern.

It could also be useful to emphasize the end of the text, by using a symbol to denote the end. Visually impaired people are used to not being able to read all of the text on a museum label; simply increasing the text size may signify that this part is legible but the visually impaired visitors may expect to be missing something beneath this text which might be written in the size usually expected. Such a symbol could be developed as a standard for all museums.[12]

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[11] E. Kentley & R. Negus, *Writing on the Wall*, 1989, p.4

[12] S. Thomas, *Welcoming your visually impaired customers - tourism*, RNIB and ABTA, London, 2000, p.5

'HOUSE-STYLE'

As much as it is important to develop a clarity of style in formation of the text itself, it is necessary to standardise presentation of the text, to establish a 'house style'.[13] People with visual impairments will then become accustomed to the style of the written text for their eyes to follow. Constantly having to read labels of different styles will become tiring for people who are finding reading of the text size difficult already and they will be dissuaded from the attempt. The principles of colour contrast represented in chapter 7 also apply to label, wall panel and advertising literature design. A good contrast between the text and its matrix is essential, with the text a darker colour than the background. The reverse can be used, creating what is termed 'reversed out' text, but this can only work if the type, weight and size are in keeping with a matt, subdued background, presenting a good level of contrast, which does not obtrude on the text.[14] Reading pale text on a dark background is harder so the length of a label using such a technique should be short.[15] Photographs or illustrations should not be placed behind text for a similar reason.[16]

POSITIONING OF INFORMATION

Positioning of the information in an exhibition can also help accessibility. If a 'house style' could be established for the positioning of labels and information panels, in much the same way as a 'house style' for the presentation of the text itself, people with visual impairments would be able to adapt to looking consistently in a certain place for textual information. For

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[13] E. Kentley & R. Negus, *Writing on the Wall*, 1989, p.7. Discussion is presented here and in the following pages as to elements which should be considered in forming a House Style.
[14] Reversed out text is defined as pale text on a dark background.
[15] B. Serrell, *Exhibit Labels: An Interpretive Approach*, 1996, p.195
[16] G. Nolan, *Designing Exhibitions to Include People with Disabilities - A Practical Guide*, 1997, p.11

example, labels could always be placed to the left of an object. This may intrude too much on exhibition design, and indeed may not be possible for every exhibit in a gallery, but the positioning of information requires as much consideration as the positioning of objects.[17] Labels should not be positioned behind a chair, in shadow, or too high or too low. Height of labels has always to be compromised with the height of visitors and people using wheelchairs should also be considered. If labels are to be inside cases, the visitor should be able to get close enough to the label to read it, as well as the position of lighting having to be considered to limit difficulties caused by reflection.[18] The eye can focus most easily on information which flat-on to it so information which might be placed low down in a case should be angled to maintain this effect.[19] Laminating labels can increase the occurrence of reflection interfering with visibility. If a sign is tactile, involving raised letters or Braille, it should be placed so it can be reached to be touched.[20]

In some cases, museums will have 'permanent' exhibitions which were designed before the DDA legislation was introduced. As well as the text, changes may need to be made to the positioning of cases, the lighting, and colour contrast, to make the exhibit accessible to as many people as possible. To completely redesign the text panels and labels alone in a 'permanent' display could not be effected immediately: an appropriate compromise would be to provide large print copies of the text and these could be left in the gallery for reference, along with a large print sign affixed to the wall close to the introductory wall panel to advise of this facility. It is also important that gallery staff are appraised of such provisions so that they can provide extra copies if required and can advise enquirers of any other facilities which may be appropriate to them.[21]

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[17] E. Kentley & R. Negus, *Writing on the Wall*, 1989, p.11
[18] See chapter 8 for further consideration of lighting position.
[19] E. Kentley & R. Negus, *Writing on the Wall*, 1989, p.17
[20] Issues regarding touch are further explored in chapter 10
[21] See chapter 12 for further discussion of the importance of gallery staff to visually impaired visitors.

AUXILIARY AIDS

There is also the possibility of using what might be classed as auxiliary aids under the DDA, Part III, Section 19. The content of labels which are placed in cases or at some distance from the viewer can be reproduced onto card or affixed to a wooden paddle which might hang by the side of a case. This could be held by each visitor and the text could then be placed as close to the eye as was necessary.[22] These "paddles" could contain all the details of the label enlarged to A4 sheets. Enlarging the point-size can be done easily on a computer, and further paper copies could be made and provided for visitors to carry round with them or take away. Obviously, this would depend on the number of objects on display and would be more appropriate for a single gallery rather than a whole museum! This method of providing information can help to reduce 'traffic jams' in the galleries, reducing the need for visitors to congregate around labels in the cases. This could be useful to fully sighted as well as partially sighted people.[23]

An easy way to enlarge existing text is to provide magnifiers.[24] Hand-held magnifiers increase text-size between 1.5 times and 10 times or hands-free, stand magnifiers can be used which magnify between 2 and 20 times. Monoculars and binoculars can be used for between 2.5 and 10 times magnification.[25] Text should be as close to the eye as possible to achieve the best results from a magnifying glass, therefore the position of the text within an exhibition is important if providing this aid.[26] The use of perspex or lamination is also important to consider, not only for being able to place a magnifying glass

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[22] Campaign for Museums and MA, *Designing a Label: Guidelines on Labelling for Museums*, 1999, p.2

[23] RNIB Leisure Services, *Making Museums Accessible* , 1995, p.10

[24] Magnifiers can clip on glasses so that people can easily alternate between using them and not.

[25] CCTV can be used to copy a page onto a TV screen and allow manipulation.

[26] RNIB, *See for Yourself 2 - Magnifiers - How to get the best magnifiers for you*, 1999, p.3

close to the text, but also for reasons of reflection lights may cause.[27] Magnifying glasses are relatively inexpensive and can be easily purchased...

ADVERTISING LITERATURE

Museums need to attract visitors to their exhibitions. The primary method used to do this is through text, using leaflets detailing forthcoming events and posters for individual exhibitions. Posters, due to their larger size, will be more accessible to visually impaired people but every poster is designed to different specifications and the essential information is given a variety of prominence. It is more usual to highlight the title of the exhibition and the artist, with the venue, dates, admission charges, opening times, and details of other facilities given lesser emphasis. There is also a preference for capitals as these letters are larger. The larger size is more appropriate for people with visual impairments but the style is not. The poster may not be sufficient to encourage visually impaired people into a museum.

It is important to let people with visual impairments know what is happening at museums and galleries. The advertising literature needs as much care as the exhibition label. Ideally, the advertising literature would be in large print initially, but printing costs can necessitate a leaflet with small print being produced for general distribution. Institutions should make it clear that a larger print version of their information is available; this can easily be done by photocopying and enlarging the printed leaflet. The photocopy will be clear if the guidelines above are followed in design of the printed leaflet. To indicate the availability of this larger print information, the visual impairment access symbol can be used, or one line of larger print advertising this facility can be included on the general leaflet.[28] Visually impaired people need to know all the

[27] Whilst labels and information panels can be lit without concern for conservation, reflection can still occur if a label is covered in perspex or laminated. For further comments on reflection, see chapter 8

[28] The MGC Disability Resource Directory, London, 1997 and the successive Directory produced by Re:source in 2001 provide useful information on access symbols.

things any museum visitor needs to know, the address, opening times, admission charges, travel details, guided tours, information about collections, exhibitions, facilities and services, and in addition possibilities of touch tours or handling sessions, raised diagrams, large print, whether guide dogs are admitted to any or all parts of the venue, and audio tours.[29]

As well as providing a larger print version of this information, the museum may consider making catalogues and other publications available in accessible formats. Organising printing of a small "special" order can be expensive, but a similar alternative as for the advertising literature could be considered, for example offering a larger photocopy of the text. A larger print catalogue could be left in a gallery for reference so it is easily and obviously available for those who might need it. Further copies could be made if requested to be taken away.

If the advertising literature cannot be produced in a large font size, for distribution outside the museum, alternative methods of promotion need to be considered to reach visually impaired people. Alternative formats for providing this information need to be budgeted for in advance. Use of audio technology is discussed in chapter 11 and this is perhaps easier to organise and can be done "in house" more easily than Braille, which is discussed later in this chapter. The easiest way to reach people with visual impairments is to establish links with local groups and to encourage a visit to an exhibition or event they express an interest in. Word of mouth is the most powerful advertising tool and if a good impression can be made, visitor numbers could increase.

INTERACTIVES

Information Communication Technology is increasing in museums as a method of interpreting exhibitions. Text is used as the predominant

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[29] A. Rayner, *Access in Mind*, 1998, p.111

medium and principles described above in the text style, background and positioning of the 'interactive' apply just as much here as in the instances described above. There are also practical considerations in the use of interactives. Not all people with visual impairments will be able to use a computer mouse effectively so there should be alternatives offered if a mouse would normally be used to operate the programme.

Websites should be designed under similar parameters. Guidelines are available to facilitate appropriate website design and the foremost provider of such guidelines is the Web Accessibility Initiative.[30] The Web Accessibility Initiative have three levels of "Priorities" within their guidelines which either must, should, or might be followed in a website design, depending upon whether they are Priority 1, 2 or 3.

Priority 1 checkpoints include the importance of providing a text-equivalent for anything which is non-text based, for example an image, a use of suitable colours and appropriate language for the body of the site. An alternative to modifying an existing site is to add a link to a new page and to make this a text-based explanation of the main site's contents.

Priority 2 checkpoints on the whole refer to more technical changes in the authorship of a site and Priority 3 checkpoints make more general comments, but include the important point that keyboard links should also be afforded for changes between pages and not continually rely on the ability to use a mouse, and also to aim for consistency in style across the site. It is also important to avoid creating complex links between pages of a site and to review the site at regular intervals, involving visually impaired people in this process.

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[30] For further information regarding the authorship and presentation of accessible websites, see the Web Accessibility Initiative guidelines available on the website - www.w3.org/WAI

Visually impaired people increasingly use computers, which can be equipped with a synthesised text reader or Braille display technology, to read printed literature or to access information by the means of websites. In the case of museums, it is useful, and may well be considered a "reasonable adjustment" to provide the information included in printed advertising literature in a website. With a general increased usage of the internet, websites are becoming an important advertising tool for any museum. Use of images will obviously help explain the general appeal of an institution and there are various packages which can be used to present an intricate site. However, such packages can create difficulties for the programmes used by visually impaired people to read the websites. A compromise is possible to produce a text only version of a website which can be accessed more easily by visually impaired people provided it is "checked" by a web accessibility checker programme, for example, "Bobby". Designing for people with visual impairments involves careful consideration of every element of the website. Such extra time and thought should create a better design for everyone to navigate.

Websites are not presented during this fieldwork because they were not assessed during the visits. The volunteers did not pass comment on specific websites but their comments on the presentation of textual information and use of interactives can be used to prove the validity of the comments made in this section.

FIELDWORK

It is hoped to show both examples of good and bad practice in use of text for general exhibition navigation from the observations made by the volunteers. After consideration it was decided to extract them into the individual sections where such examples were found.

LABELS AND SIGNS

Good examples of labelling and text size are found in museums in Lothian. The Stills Gallery has left-justified panels, black text on white background, uses upper and lower case, the labels are short and are in 14-point with no perspex covering. The panels at the Talbot Rice Gallery are similar to those at the Stills Gallery although the labels in the upstairs galleries are smaller. (Figure 69) The 'Big' gallery had labels with white backgrounds and black text.

Aberdeen Art Gallery was more successful in its temporary gallery than in its permanent exhibitions. There was a good font, possibly Helvetica, and typeface of approximately 18 point size.

Kirkcaldy Museum and Art Gallery has large print labels and uses pictograms of a person in a wheelchair on its signs, posters and leaflets. The Crawford Arts Centre tries to maintain its labels to 14 point size, and the Andrew Carnegie Birthplace Museum uses clear, bold texts. The Scottish Fisheries Museum has a good standard of labelling, as do most of the Fife museums,

Aberdeen Art Gallery uses large numbers by the entrance to each gallery to make at least some concession to orientation.

ADVERTISING LITERATURE

A large print copy of the advertising leaflet for the Museum of Childhood was available on request. The font was san serif and the print dark and large, there was no underlining and the text was left justified. It was laid out neatly, keeping one subject to a page, making good use of white space to keep paragraphs apart, and left space at the end of pages rather than starting another subject. There was lots of information - costs, dates, websites - and the information was current, so the option of large print is obviously provided regularly.

POSITIONING

Difficulties with the presentation of textual information were also highlighted by the volunteers.

Signs to indicate that further information is available need to be legible. The Royal Museum uses text in 22-point and Gill font for the information panels in the World in our Hands gallery. As stated earlier in this chapter, size and font are only good in relation to the distance from which the information has to be read . In this case, the information panels are behind interactives, inaccessible to people in wheelchairs. At the Museum of Childhood, there is a sign to say there is an information leaflet in large print and Braille available at the desk . This is by the lift on the second floor and is tucked away behind chairs, so would be obscured by people sitting on them.

In the McManus Galleries' exhibition of "Into the New Age - Scottish Art 1945 - 1962", the information panel takes the form of a Chronology Board. (see Figure 42) This was quite high on the wall about two-thirds being legible to the person of average height. If labels are too low, visually impaired people will not wish to alter position especially to view it as the dominant

thought is that all text is inaccessible. There were signs warning "Please do not Touch" but these were placed at a low level in the Archaeology Gallery so would probably be unseen by visually impaired people. The Chronology Board uses columns which can be confusing as people naturally try to read across, particularly if their vision is poor. Keeping the columns to one board rather than two was helpful as otherwise people may not realise the second is a continuation from the first and some information may be lost.

Kirkcaldy hung the labels at a low height in some of the galleries. The Collins Gallery had creased labels in about 16-point and justified. Some were also placed a little high. In the Weaponry case in the Archaeology gallery at the McManus Galleries, the labels are at the back and cannot be read easily as they are obscured by the objects.

The room signs in the Museum of Scotland are very small and the map for the audio-guides was not accessible either, with a sighted person only being able to glean that there was an audio-tour for visually impaired people from the printed information. Some exhibit numbers and labels to signify inclusion in the audio tour are laid down horizontally in the Kingdom of Scots Gallery in the Museum of Scotland, which are hardly visible to people stood upright let alone in a wheelchair. Horizontal text can be acceptable once you have focused on it but it is not a favoured position. The fat arrowhead shape of figure used in the Museum of Scotland was difficult to find and the blue colour used was not always in the same place on the symbol. The symbols were so poor that only two could be found for the highlights tour in an hour. Sometimes the symbol was hidden and the colours of blue and green, chosen in the Museum of Scotland tour are commonly confused by colour blind people.[31] So you would have to remember the position of the colour on the label for each tour. At least the symbols were big enough to see, even if faded in the Royal Museum. (Figure 68 and see also Figure 72)

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[31] See chapter 7 for a discussion of the terminology 'colour blind'.

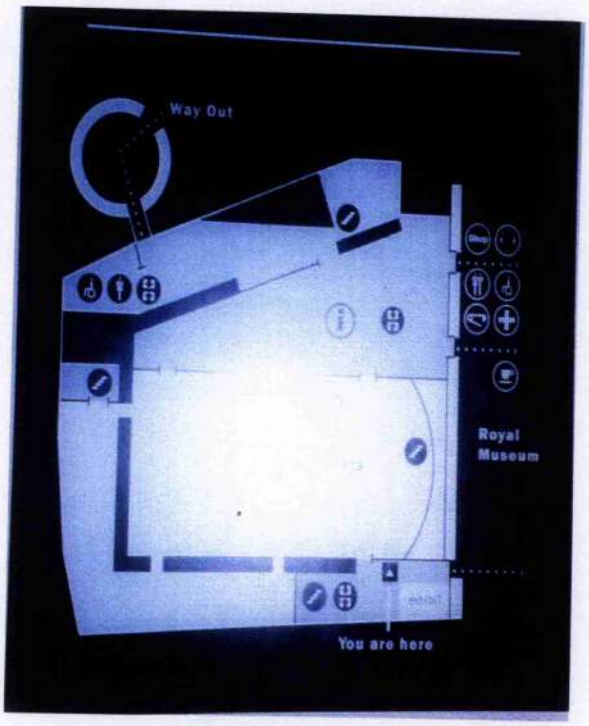

Figure 68 - An example of a wall panel in the Royal Museum of Scotland, Edinburgh, illustrating use of 'reversed out' text

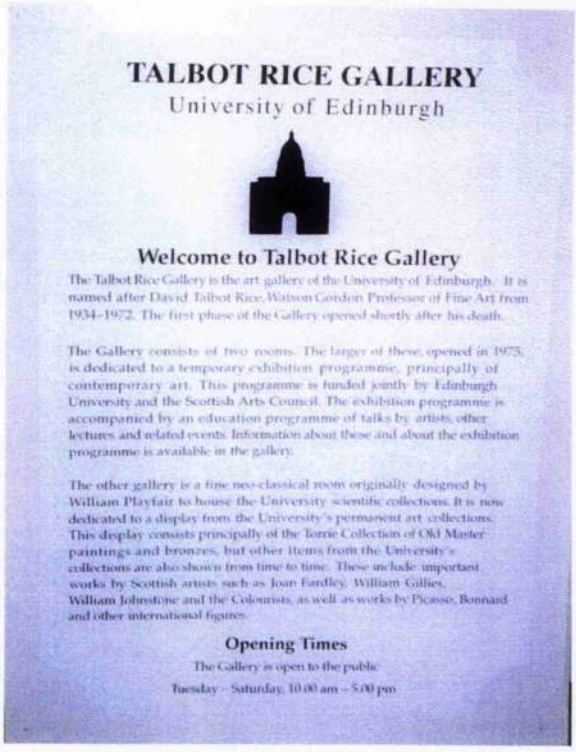

Figure 69 - An example of a wall panel in The Talbot Rice Gallery, Edinburgh, illustrating good contrast between the text and the label matrix

The Animal Hall at the Royal Museum has a lot of bare wall around the exhibits, which could have been used for more information panels or enlarged versions of the labels in the cases. Reference on these panels could be made to the animals in the cases by coloured blobs indicating which piece of text referred to which exhibit, so no text need be behind glass and inaccessible. The colours chosen would not be influential because the tones would be the same next to the animal and the text pertaining to it. The information panel which is there has white text on a green background and is too high up on the wall, but it is at least not behind glass and is a reasonable point-size, although the light does glare off the shiny surface.

The bare wall below the exhibits in the McManus Galleries' Archaeology gallery could be used for tactile text: hands can reach down without someone necessarily having to alter an upright body position

In the permanent galleries at Aberdeen Art Gallery, for example in the Murray Room, the labels are smaller, small fonts are used, and the label matrix again blends with the wall colour, this time either orange or red. This gallery was designed before disability issues came to the fore and lack of staff-time is the reason given for lack of contemporary standardisation in label presentation. The labels in the balcony area are covered in perspex but this is not always a problem for reflection; it depends on the lighting and how close people can get to the label.

COLOUR CONTRAST

The text used on the Chronology Board at McManus Galleries during the exhibition of "Into the New Age - Scottish Art 1945 - 1962", was itself little more successful than the positioning of the panel; the point-size is quite large, but the colouring of blue on white is not as good as black and the orange numbering was quite difficult against the white. However, the blue text and orange text were easily discernible from one another.

The Time of Our Lives gallery uses blue text on glass and red text on black background using capitals and the settlement section has black text on a green and white version of a black and white photograph, very difficult for partially sighted people to read. The Fergusson Gallery has small justified labels. In the McManus Galleries, the Archaeology Gallery maps have helpful bold text for place names. The smaller size of the explanatory labels in both of these galleries renders them illegible. If the label is not legible, it is impossible to discover what the object is, its age, provenance and any further details.

The World in your Hands gallery information panels have white text on red background which is very dazzling, and the text on the whole is too small. This gallery again has a poor balance of text and space. 'EXTINCT' on the Dodo case was positioned at the top obviously not to obscure the view of the bird. It was meant to be understated but it is usually unseen instead. The Carnivores and Reptiles gallery has small text again with some labels laid flat on the base of the case.

HOUSE-STYLE

The Marischal Museum suffers from lack of standardisation. The Collectors' Display downstairs has minimal labels to encourage focus on the objects. The text is small, is serif style, and brown in colour, making it difficult even for a sighted person to read. There is a case for under labelling to make people think rather than read but this does not help visually impaired people, and other methods of interpreting the exhibition should be offered in this case. The Egyptian and Greek vase section has small font sizes and there is poor differentiation between the colours of the text, object numbers and label matrix. This display dates from 1995, at the start of the DDA, obviously before the advice had been taken into account. The temporary display in the Library used justified text so there is no standardisation of print throughout the museum. The labels are laminated and very shiny and reflective.

Perth Museum and Art Gallery had no standardisation in its labelling system. In the applied art gallery, the text for the Strathean glass was white italic on black or green italic on black. Upstairs the Communion tokens had small text and the titles were in capitals.

The 'worst' case of labelling discovered was at the Museum of Childhood. The information panel at the start of the downstairs galleries uses white text on a grey background and also red, green, yellow and blue text to differentiate each gallery. The sticky letters can be picked off and the chairs in front of it encourage people to sit down, thus obscuring the information from others. Between the two visits, January 1999 and July 2000, there was no alteration to this situation. The labels in the cases are positioned at the bottom of the case or at the sides. The numbers for reference of the objects are not always clear and could have all been larger. The labels at the base of the cases may have been positioned for children as it is a 'childhood' museum, but even children would have to kneel to read them. Although labels are time-consuming to retype, they can be moved more efficiently than individual lettering.

ADVERTISING LEAFLETS

Similar concerns should be shown to the presentation of advertising literature as to the labelling within the museum. The museums visited which provided advertising and information leaflets had varying degrees of success and some examples of common difficulties are presented below.

USE OF COLOUR

The Marischal Museum has an A5 leaflet in white paper and black text. This was one of the more successful examples because of the simple style and use of 14-point text. The Fergusson Gallery has an A5, double-sided leaflet, using blue text in a sans serif font on a pale cream background. The contrast here is good, but the difficulty arises in the small point-size for the type. Other information leaflets have black text, sans serif font, with a cream or yellow background, with a similarly small font decreasing their usability by people with visual impairments. The Preservation Trust Museum in St Andrews adopts a concertina-style A4 leaflet with a cream background and blue text; despite the deviation from black on white, this again still keeps the contrast strong. Crail Museum and Pittencrieff House Museum use a double-sided A5 leaflet with sans serif, black text on coloured paper, but again the point-size is small. The option of a larger print leaflet is not available in any of these museums.

The Crawford Arts Centre leaflet has a white background and changes text colour with each new leaflet. Therefore, sometimes it is more successful than others. The text is always small and sans serif. However, a large print copy of this leaflet is available in all the galleries here for reference and can be photocopied if visitors would like to take a copy away with them. This is a good, inexpensive compromise.

Individual event information sheets from NMS use coloured paper with black text. The success of the contrast depends on the colour of the paper used. The text is small, also, but a sans serif font is used.

The Talbot Rice Gallery uses 'reversed out' text but the typeface is too small for it to be effective and the Collective Gallery uses red type on a black background which is similarly difficult to read. The Stills Gallery also uses 'reversed out' text, white on pale blue; again the small font size increases the poor legibility. The interior text is black on white, but small and serif.

The Writers Museum also produces its own individual literature similar to the majority of the Fife leaflets, using a small, serif font. Each writer at the museum has a leaflet using a two colour format; the leaflet designed for the Robert Louis Stevenson display, uses the worst contrast of yellow as the second colour with black.

Permanent leaflets for the McManus Galleries tend to be two colour, with black text in a sans serif font and a pale coloured background. The 'in-house' designs appear to be more successful than when editorial control is passed over to an outside body.

TYPE-SIZE AND STYLE

The Laing Museum, St Andrews Museum, Crawford Arts Centre, British Golf Museum, St Andrews Preservation Trust Museum, Kirkcaldy Museum and Art Gallery, Scottish Fisheries Museum, Andrew Carnegie Birthplace Museum all opted for the same style of leaflet, an A4 sheet folded like a concertina into six sides. This provided for the inclusion of more information but the size of the type required to accommodate this was too small for the volunteers.

Edinburgh City Galleries use a generic leaflet similar to *Discovering Dundee*. The interior text is small, sans serif, and black on white with coloured headings.

PICTORIAL BACKGROUND

Aberdeen Art Gallery produces a small booklet regularly, using white paper with many pictorial images and a variety of colours for the headings. The cover is usually pictorial with text over the image, or with a coloured box for white text. The font is serif and the typeface small. No mention is made of a larger print/alternative format version. The NMS and the National Galleries of Scotland produce booklets similar to Aberdeen. The DCA uses a booklet similar to that at Aberdeen. The interior text is usually black, with text on the outside overlaid on an image so this text is usually white. The font is sans serif but the typeface small.

The McManus Galleries, Dundee, uses the *Discovering Dundee* leaflet which includes more than this particular galleries' details. The front cover is always coloured with images and the text is not always a suitable tonal contrast with the cover. The format uses various colours of text. As the leaflet is reproduced regularly, its effectiveness as a leaflet useful to visually impaired readers alters with each production.

The Laing has a white background on the inside pages with black serif text, small typeface, and coloured headings. The outside cover has an image on it and text overlaid. Other information is black, small, serif text on yellow paper. The St Andrews Museum is similar but its extra information is on blue paper. The British Golf Museum and the Scottish Fisheries Museum use the same design The text is always small and sans serif. Kirkcaldy Museum & Art Gallery and Andrew Carnegie Birthplace Museum use a pictorial cover with overlaid text, and the inside is similar to the Laing.

As mentioned previously, serif text looses some definition for visually impaired people when it is used in the best of contrasts but used overlaying other complicated backgrounds is almost always illegible for them.

INTERACTIVES

The Royal Museum has several interactives in The World in Our Hands gallery. These were used to supplement the educational aspect of the exhibition, using a question and answer system for their text. There were five in total which the volunteers used. Each one used a different colour for the background to the text, either red, pale blue, yellow or grey. The text was sans serif and of an appropriate type size and was black on all the interactives, making it quite easy to read the text on the pale yellow and pale blue interactives, but more difficult on the red and grey.[32] The buttons lit up panels containing images and text was overlaid onto them; the backlighting was helpful for a visually impaired visitor

The dark colour did not hinder locating the interactive in the darker The World in Our Hands gallery as it was positioned close to the entrance area which was well-lit. In the Museum of Scotland, the dark grey provided a good contrast to the predominantly cream surround.

However, the nature of the lighting at the Royal Museum affected the use of these aids. The reflection on the screens used for the 'yellow' and 'grey' interactive made it impossible to read some of the information. The other interactives did not use a screen but used horizontal panels which rotated when pushed over, with the question text on the top surface and the answer retrieved by pushing the panel over. The interactive was at a reasonable height to use for this purpose, but the type for the answer on the blue interactive was smaller

[32] See chapter 7 for a more full discussion of issues of colour contrast

than for the question, so some visually impaired people could read the question but not the answer. On one visit the grey interactive was not working and a very small note had been attached to this effect at the top of the screen area; it was in shadow and very difficult to find. The red interactive, along with the grey, required buttons to be pressed to find information. The buttons lit up panels containing images and text was overlaid onto them. The backlighting was helpful for a visually impaired visitor but the text was difficult to decipher from the background image.[33]

The fifth interactive in the Royal Museum of Scotland was similar to those used in the Museum of Scotland. A dark grey surround was used to frame a computer screen. Reflection did prove a problem on the screens and the text was mostly white on a dark background and quite small; this led to great difficulties of legibility and locating the instruction text to be able to use the interactive correctly. (Figure 70)

[33] See chapter 8 for a more full discussion of issues of lighting

Figure 70 - The two different styles of interactives in The World in Our Hands gallery, Royal Museum of Scotland, Edinburgh

Braille

Braille is not always the answer for provision of textual information, particularly for people who lose their sight in later life. Tactile letters may be an option as the visual memory of letter shapes will help recognition. They are easy for sighted people to read too. Moon is the accepted tactile lettering now and the RNIB provides a sheet detailing the alphabet.

Moon was invented in the early nineteenth century following various attempts at creating embossed symbols for people with visual impairments. The advent of Braille, in the mid-nineteenth century, saw the end of all linear raised alphabet systems apart from Moon.[34] Linear systems were based on the letters as they looked. This was not necessarily the answer for someone who had no concept of what a letter looked like. The thought that somehow the skin and muscle senses could mysteriously take the place of sight and enable blind people to read by touch what could be read with the greatest ease by sight, led practically all who tried inventing embossed symbols or letters to imitate the forms used either in normal print, or handwriting.[35] Point systems have fairly sharp discernible points and are more recognisable than lines. Braille developed from Barbier's system in France. The frame Barbier used to form his point system was downsized by Louis Braille so it could be covered by one finger; now people read the points as letters and not as single points. Braille was blind from the age of 3 so he did not try to adapt sighted symbols for the blind but worked from the point of view of a blind person.

The number of Braille readers in the UK is relatively small, about 15,000 or 2-3% of visually impaired people. Braille labels will give those readers a degree of independence, but should be accompanied by large print labels for partially sighted people and the escorts and companions of blind

[34] Moon was not encountered during any of the fieldwork visits. Tactile lettering is perhaps the most similar representation of raised letters which museums might adopt.
[35] R. Slayton French, *From Homer to Helen Keller - A Social and Educational Study of the Blind*, PhD Thesis, New York, 1932, p.50

people. Large print labels can be overlaid by a transparent Brailled label. Simple Braille labels can be made on Dymo tape, or if something more permanent is required, metal can be embossed with Braille. 'Portable' Braille information sheets could also be provided.[36] Information on producing Braille can be obtained from the RNIB.[37]

Dymo machines can be used to make Braille versions of labels. Local organisations for visually impaired people could assist with this to provide for those who used Braille. Dymo sticky labels can be easily removed from walls or exhibition panels, similarly to printed labels.

The volunteer felt that Braille could be used in the Collectors' Display at Aberdeen. Raised lettering is probably the better alternative and capitals should still be avoided, as they should when using Braille. It is important to get the Braille correct and so it is better typed by a user who can also read it to check it. If the Braille is wrong, people think they are incorrectly interpreting it, not that the Braille is incorrect. Edinburgh has the potential to be well-served for Braille as there is a Braille Unit which has produced information about *Blind Alphabet C*. Braille in the *Blind Alphabet C* exhibition provoked a lot of interest amongst sighted visitors and helped further the understanding of visual impairment. Braille was used on the Antenna Audio guide at the Museum of Scotland but nowhere else in the museum. The only occasion Braille was discovered during the visits was on the lift controls at the Talbot Rice Gallery. (Figure 71)

The other museums visited had a negative view of Braille on the whole, but the Scottish Fisheries Museum, Anstruther, plans to use Braille in the future, and the British Golf Museum, St Andrews, has Braille in the short guide to its events. There is only a small proportion of people with sight difficulties who use Braille but if it is offered it could be appreciated and attract people with severe sight difficulties who might not otherwise visit museums.

[36] RNIB Leisure Services, *Making Museums Accessible*, 1995, p.11
[37] From website www.rnib.org

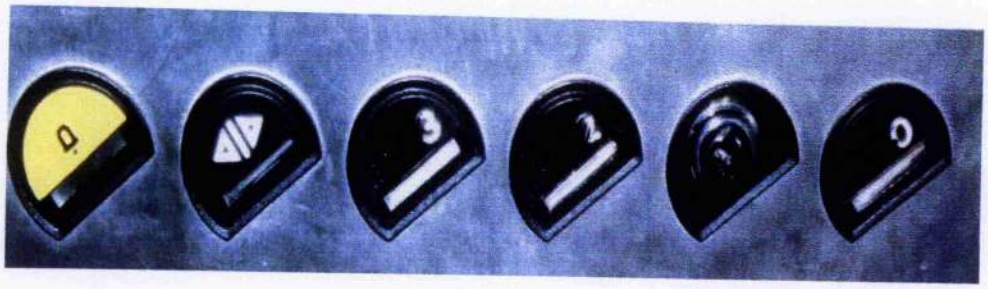

Figure 71 - The lift controls at the Talbot Rice Gallery, Edinburgh, illustrating the use of Braille

CONCLUSION

The provision of textual information certainly comes within the remit of Part III of the DDA. It is an important method of communication both within the exhibition space and as a means of advertising museum events, and falls within the category of "auxiliary aid" as stipulated in the Code of Practice referred to in this chapter. As such, it is something which requires urgent attention within the museums community.

The success of the provision of textual information in the museums visited was varied. Some labels and text panels had obviously been produced many years before the advent of the DDA and were not suitable for the volunteers who assisted with this fieldwork. If textual information within a gallery is illegible due to the size of the print or the colour contrast between the text and the background, the appreciation of an exhibition can be affected, and likewise, if signs are poorly designed in a similar way, the ability to navigate around the museum becomes frustrating. Improvements to text-based information can be initiated quite quickly and simply by photocopying and enlarging the existing information and presenting this in the gallery as additional information which visitors can use. Further developments may take more time but there are ways in which change can be quickly effected.

Advertising literature and websites also need to follow the same principles, otherwise visually impaired people will still not be aware of the museum's facilities and exhibitions. To produce a large print leaflet and to include the same amount of information as a smaller print version, might increase printing costs; again, a possible compromise is to produce a simple, large type version of the text of the advertising literature in-house and to offer this alongside the printed leaflet both within the museum and at external advertising venues. A small amount of large type can also be added to the printed version, indicating that 'a large print version of this leaflet is available on request'.

This could be interpreted as a 'reasonable adjustment' to the presentation of textual information.

This chapter illustrates that the assumed preferred choice of Braille in producing textual information for visually impaired people is not necessarily the correct way to proceed initially, although such provision should certainly be considered. Large print text was preferred by the volunteers and it was also emphasised that the size of the text need not dominate the displays. Aesthetic concerns are often offered as a reason not to provide large labelling but if the correct font is chosen and the information is presented succinctly, the labels will not become obtrusive. Some visual impairments will not benefit from large text; people with "tunnel vision" which can be caused by retinitis pigmentosa, for example, prefer smaller text because this will fit within their field of vision more easily. Whilst there are various visual impairments, and the situation for museums is far from easy to satisfy all the members of their audiences, the production of text with a greater clarity of form will assist all visually impaired people.

Text is the most usual way to present information to visitors and has been since the early development of the museum.[38] This fieldwork has shown the importance of the manner of the presentation of the printed word, and, as most museums will advertise by leaflet or advert, it is the method used to potentially attract the largest number of a museum's visitors.

As there are so many ways that text can be presented, a design standard or similar should be devised to make museum professionals aware of the most appropriate fonts, type-sizes, and so on, to use to be as inclusive as possible to audiences of people with visual impairments or to existing audiences. If people with visual impairments can access the information, they might well decide to access the museum eventhough they might previously have felt there was nothing there for them to see.

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[38] T. Bennett, "Pedagogic Objects, Clean Eyes, and Popular Instruction: On Sensory Regimes and Museum Didactics", *Configurations* vol. 6, p.358

Chapter 10

TOUCH

> This rather troubles me. From early childhood we are taught that we have to *identify* everything and we are praised, given marks and 'stars' if we can name something - describe its shape, colour and so on. This, of course, is most necessary for our development. (And we are *also* continually told "Don't touch"!)[1]

For people with visual impairments, the sense of touch is relied upon to help identify things. The opportunity to touch assists in completing the identification of an object, confirming texture and feeling the finish of a particular design, even if the object appears clearly visible. The reliance placed upon touch by people with visual impairments is dependent on the level of the visual impairment. If sight is quite badly impaired, the use of touch can help educate the viewer as to the shape of a particular object, of which there may or may not be mental recollection from a time before sight deteriorated.

The loss of sight or any of the five senses does not automatically mean that the remaining senses are heightened. Smell, taste, hearing and touch may become more practised and developed but this requires time, effort and understanding. To touch effectively is not something which comes instinctively because sight cannot be relied upon. It must in no way be assumed that visually impaired people are very good at touch or that they necessarily instinctively would choose this way to interpret objects.

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[1] Editorial, "Beauty by touch", *New Beacon*, vol.73, no.868, September 1989, London, 1989, p.326

Sighted people can absorb information about an object or about an exhibition far more quickly than those who cannot rely on this sense. It takes a longer period of time to absorb details if they cannot all be witnessed at the same time, as is possible with sight. It has been hypothesised that people who lose their sight in later life will, in general, respond more quickly to using their other senses, particularly in the dimension of using touch as, although touch is "crude and gross in comparison with sight, there is a curiosity which has been stimulated by earlier sight to identify things."[2]

People who have lost their sight in later life retain a visual memory of what they have seen so they can use verbal description of an object with relevant comparisons to gain an image of the object in front of them.[3] Touch however will enhance the experience and is particularly important for people who are born without sight to enable an appreciation of shape and texture.

Museums have various difficulties with increasing access to their collections or exhibitions by offering touch facilities. Exhibitions are reliant upon the artists' guidelines as to what can be done with their work. In many instances, touch is felt inappropriate for pieces due to fear of damage so other methods have to be found to interpret the work to visually impaired visitors. For collections, concerns are similar but there is the added figure of conservation in the equation. Touch is perhaps the most difficult provision visually impaired people require museums to provide. The responsibilities to the artists' wishes for their work must play an important part in determining how "reasonable" an "adjustment" offering the opportunity to touch actually is.[4]

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[2] V. Mehta, "Growing up blind in a sighted world", *New Beacon*, vol.67, no.798, October 1983, London, 1983, p.254

[3] See chapter 11 - The style of an appropriate description can be discussed with visually impaired people, if a working group is formed, before the provision is put in place.

[4] DDA, Part III, Section 21

The source of fear of blindness in many people who still retain their vision is the feeling that sight is at the top of the hierarchy of senses, the most essential sense, and that without it one would be helpless. As already stated, the loss, or impairment, of sight does not immediately endow someone with a special sense to appreciate the world in other ways. However, a reliance on other senses does allow them to develop to a higher level than in someone who relies first and foremost on sight. Sighted people can be educated by what they see in museums more easily as they can recall an accurate image when they go back to visit again even after quite a passage of time; touch can create a similar idea in those with little or no sight. The difficulty with museums and this scenario is that there are infrequent opportunities to explore objects through touch. However, touching is the best, most immediate and direct way for visually impaired people to access objects.[5]

ART OF TOUCH

The skin consists of two layers, the epidermis, the thin outer layer, and the dermis, the second layer which is much thicker. The thickness of the epidermis varies across the body; areas of pressure, for example, soles of the feet, have a thicker covering. Hands are also an 'area of pressure' so have a thicker covering of epidermis.

The sense of touch really includes all the sensations we feel with our skin: touch, pressure, pain, heat and cold. The way we feel things with our skin is not always fully appreciated. It is believed to work through a system of sense organs scattered throughout the dermis, linked by nerves to the brain.[6] There are different types of receptors for different feelings. Meissner's receptors, in the

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[5] R. McGinnis and M. Weisen, *Guidelines for describing museum objects and paintings to blind and partially sighted people* , Presented at the Group for Education in Museums (GEM) Discussion Seminar, London, Wednesday 31 August 1994, p.4

[6] S. Goodman, *Biofacts*, Oxford 1993, p.43. There is an inconsistency with this idea in that we feel pain, pressure, and temperature in our ears where there are no nerve endings.

upper dermis, detect light touch, Ruffini receptors, slightly deeper, react to heat, and Krause receptors react to cold. Near the base of the dermis are Pacinian receptors, which sense heavy pressure. These receptors are spread unevenly throughout the skin layer. Fingertips have a dense concentration of touch Meissner's and Pacinian receptors.

Every person has a unique pattern of ridges on the skin of the fingers and toes, commonly termed as 'prints'. These 'prints' help hold and feel whatever the fingers are in contact with. If an object has a smooth surface, the thin film of sweat which covers the fingers helps to form a hold. It is this thin film of sweat which can create problems for touching museum collections and exhibition pieces. The moisture can only be prevented by constantly washing and drying hands, something which is not practical for handling museum pieces. Powder could be used to absorb moisture but this might cause difficulties with conservation depending on the piece to be handled. Dry hands do not enable the touch receptors to work as effectively so it is not a satisfactory option for a participant in a handling session. Wearing gloves is the option usually available if there are handling opportunities at a museum; this helps to protect the museum object but the participant is prohibited from gaining a true appreciation of the texture of the object. Offering replica objects or not offering touch at all are the other two options offered by museums. These also prevent a true appreciation of the object by the handler.

USE OF TOUCH

The ADAPT Trust and the RNIB advocate touch where possible but touch alone, without accessible description, is not as effective.[7] Touch is time-consuming.

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[7] See chapter 12

> But nearly all blind people known to the writer would rather at any time hear a good reader than read for themselves even those books that are accessible to them in point [braille]; this is a physiological phenomenon, perhaps due to the fact that hearing is a very much less tiring process than reading by touch. Hearing, too, offers a much more coherent whole, even the best point readers having frequently to pass over in mental repetition what they have covered with their fingers.[8]

There are various ways in which touch can be offered as an interpretative method in museums, including touch tours, handling sessions, tactile images of 2-dimensional objects.[9]

An understanding of the whole form is the first thing to establish, possible by touch alone but a full explanation is needed to access detail, texture, colour, materials and methods of design and construction.[10] If the work is on a very large scale, it can be most helpful to be given a raised smaller scale image of the work to give a comprehensible over-view of the object. A joke can still be funny, even if you have to have it explained to you: often this is the way we develop our sense of humour, as well as finding something immediately funny, without a commentary, so can an object also be explained.[11]

Verbal description is also needed to accompany raised images of paintings which can tell visually impaired people about the content of a painting, but the subject of the work needs embellishment by a tactile diagram. They may be raised line drawings; three-dimensional models; small pieces of fabric or other items that match those represented in a painting; pieces of the material

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[8] R. Slayton French, *From Homer to Helen Keller - A Social and Educational Study of the Blind*, 1932, p.98

[9] R. McGinnis, Chapter 28, "The disabling society", in E. Hooper-Greenhill (ed), *The Educational Role of the Museum*, 1999, p.280

[10] W. Kirby, *notes to a student enquirer*, 1997, p.2. This information was enclosed with correspondence from William Kirby.

[11] Ibid., p.3

from which the object was made, for example iron, stone or marble, and so on. Touch engages the imagination and can provide a more complete and direct understanding of an object or the contents of a painting for both sighted and sight-impaired people. Replicas of objects are not encouraged, unless the object absolutely cannot ever be touched.[12]

In the instance of two-dimensional artworks, an organisation known as the Living Paintings Trust, which originated in 1989, aims to enable visually impaired people to experience art by the way of sound and touch. The Trust aims to provide access for visually impaired people to works of art which they cannot experience by means of sight, either because of the level of their visual impairment or because the venues of the artworks are inaccessible for one reason or another. The work of the Trust began with the production of tapes describing artworks and the desire to create accompanying raised diagrams of the images the tapes describe. These raised diagrams now take the form of "thermoforms", a raised diagram of the image attached to a lightweight piece of wood. The cavities of the raised lines are filled with foam to enable them to be touched without distortion. A Braille heading or piece of explanatory text is attached to the back of the piece of wood. These "bats" can be left in galleries as an interpretative aid, or, with tapes, can be offered to visiting groups or individuals by request. The "bats" can also be constructed from bronze effect materials which are more durable and can be wiped clean.

The thermoform technique originated from an initial attempt to present a raised diagram of Claude le Lorrain's *The Enchanted Castle* using various textured articles to represent elements of the painting.[13] Dried juniper and cement was used to create the representation of vegetation, aluminium mesh for the rippling water, and balsa wood for the castle itself. This image was embossed onto braillon sheeting and the initial thermoform was created. The

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[12] R. McGinnis and M. Weisen, *Guidelines for describing museum objects and paintings to blind and partially sighted people*, 1994, p.3

[13] See www.livingpaintings.org for further information.

later developments of the thermoform technique involved the use of plaster and plastics to create the final image, and the packaging used for postage had to be carefully researched to protect the products when in transit. As well as the thermoform image itself, colour reproductions of each image are included in the packages. This increases the accessibility of the package to people who have some sight and can appreciate this type of visual image; it also enables blind and partially sighted people to appreciate the packages together. Taped descriptions of the images are also included to provide a verbal explanation of the images in words and also to provide instructions as to how to make best use of the thermoform images.

There are several museums in Scotland which offer the possibility of using packs from the Living Paintings Trust. Of those included in this research, Aberdeen Art Gallery offers two packs and Kelvingrove Museum and Art Gallery, Glasgow, offers three. The Living Paintings Trust also supplies a library service from which museums can hire out albums for outreach workshops, or individuals can contact the Trust and arrange an appointment to visit. The Living Paintings Trust provide their service for people of all ages, having developed Living Picture Books for use by children in schools alongside complimentary Teacher Resource Packs. Approximately 4,000 visually impaired people use the library service provided by the Trust and very many more could use the packs provided by museums with suitable advertising of the opportunity and the provision of sufficient staff to manage the sessions.

As well as the opportunity to explore artworks by means of touch, it is equally important to provide a means of navigating the way round a gallery by touch. The potential of offering tactile signage as an alternative to plain text is increasingly possible for museums, and should be explored as a reasonable alternative under the stipulations of the DDA Part III. The museums visited as part of this research did not use tactile signage but it is now readily

available from companies such as Taktyle.[14] The signs produced by Taktyle are made from moulded plastic with a matt finish to prevent reflection. The plastic surface and the fact that the signs are printed under the surface is a further recommendation for this method as the surface does not scratch when consistently touched. The moulded signs also avoid the danger of sharp edges. Taktyle have also patented the design technique of applying borders to their signs to further guide the hands of those who touch and also to indicate the different types of signs. A triangle border is used for signs indicating approaching danger, circle borders for those displaying room names, and square borders for signs giving general directions. These borders also assist the people using them by guiding their hands to the centre of the sign. As well as a raised image, these signs provide a Braille version of the lettering or description of the image. The signs are positioned vertically on the wall so the Brailled text is kept to a minimum due to the difficulty of reading Braille in an upright position.[15] The signs also take colour contrast into consideration, offering alternatives of black images on a white background, and white images on a dark blue background. The appropriate colour choice can be made to suit the colour of the wall to which they are to be affixed.

It can also be useful to send out information before organising a touch session. This can contain a brief description of the contents of the session, both what will happen and some background to what will be included in the session. Staff will have to be present at all times during the session. The difficulties of museums providing pieces for such a handling session have been discussed earlier but objects which are robust and of which the museum has more than one should perhaps be placed into such a session or a handling box for workshop activities to increase the knowledge of the object, and the

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[14] See website - www.taktyle.co.uk - for further details of these products. Taktyle is selected here as the example to include within this discussion as it was mentioned by a volunteer during the visits as being a particularly successful product.

[15] For further discussion of Braille, see chapter 9

experience of the museum visitor, especially one with impaired vision.[16]

It is not that people do not want to touch but it is just 'not done'. People are used to distance and space, which is a very British cultural phenomenon. The Blind Alphabet C exhibition was for appreciation without sight but if the exhibition were more visually attractive more sighted people might have come along and experienced touch! Sight attracts the sighted, but this is surely coming away from the point of the exhibition. Maybe there should have been a notice on each basket to say "please touch" to inform visitors that they had 'permission' to do so. This may have helped the guides but would again have given a visual clue to the exhibition. A sign next to the title on the wall saying "Exhibition for Touching" might have helped, as an extension of the title. Taking away the security of sight seemed to inhibit the sighted and they did not want to appear not to understand. The exhibition was an exercise in using the imagination but sighted people felt intimidated by an experience which should have been fun.

FINANCE

The resources to fund touch facilities such as raised images from The Living Paintings Trust and Taktyle symbols. Quotations were sought from both suppliers and, whilst reticent to provide exact costings without an exact project, approximate figures were provided. An individual raised image panel from The Living Paintings Trust can cost from around £400.[17] Signs from Taktyle start from between £50 - £100, but discounts can be offered for large orders.[18]

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[16] R. Hodge and W. D'Souza, Chapter 4, "The museum as a communicator: a semiotic analysis of the Western Australian Museum Aboriginal Gallery, Perth", in E. Hooper-Greenhill (ed), *The Educational Role of the Museum*, 1999, p.58

[17] Taken from pricing information produced by The Living Paintings Trust in autumn 2002.

[18] Taken from pricing information obtained from a representative of Taktyle in winter 2002.

FIELDWORK

It would be unfair to say that offering touch facilities is good practice and not doing so is bad practice. The first part of this chapter indicates reasons why touch facilities might not be possible and it would perhaps be unfair to label such museums as displaying bad practice because of this. However, the museums visited which were able to provide touch facilities are included in the discussion below as offering examples of good practice.

HANDLING BOXES

Two of the museums were able to provide handling boxes, either to use during workshops on museum premises, or to be used in outreach projects organised by the museum, or taken out of the museum by an external organisation. The Marischal Museum in Aberdeen provided a handling box usually for use by groups within the museum. The Museum of Childhood had designed reminiscence boxes which could be sent out on request to groups in the Edinburgh area and were used in their own workshops.

TACTILE EXHIBITS

There was only one example of this encountered in the museums included in this research. The recently opened Zulu gallery at the Scottish Fisheries Museum, as discussed in chapter 4, has two tactile exhibits within its introductory area. Edinburgh City Galleries would allow objects to be touched in exhibitions with curators' permission obtained in advance, and at the discretion of the artists. Similar touch sessions were possible at the Royal Museum provided people booked in advance. The volunteers appreciated these ideas, which were also alleged to be possible in museums in areas other than Edinburgh, although none of the volunteers had encountered it in the museums included in this research.

DIFFICULTIES IN PROVIDING GOOD PRACTICE

Obstacles in providing touch facilities were highlighted.

HANDLING BOXES

Several museums suggested they would like to increase their handling provisions but for institutions with predominantly temporary exhibitions, like the Crawford Arts Centre, such development is difficult and dependent on each artist. There can be no promise of touch tours all year, for example. Availability of finance to provide staff to supervise handling sessions was also stated as a barrier to this method of interpretation.

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There are two examples where improvement could be made in the provisions already offered. Addition of explanatory information within the handling boxes, similar to those offered at Museum of Childhood and Marischal

Museum, would have been welcomed by some of the volunteers. This could provide more information about how the objects were used, their date and so on

Some of the volunteers explained that now, out of frustration, some visually impaired people touch without permission! This is obviously not ideal for a museum but it does indicate that people with visual impairments are keen to see the provision of touch facilities and museums should investigate providing for this need if at all possible.

CONCLUSION

The provision of touch facilities by a museum in conjunction with a particular exhibition or as a representation of its collections could be perceived as an auxiliary aid under the terms of the DDA Part III. However, whether such a provision is a "reasonable adjustment" depends largely upon the factors of expense, staff availability to monitor any tactile resources and the relevance of touch facilities in a particular case.

In the light of the DDA and the perception that improving access for people with disabilities to museums includes improving access directly to collections, visually impaired people are increasing their demands for direct contact with the collections and exhibition pieces. Touch has to be considered by all museums as a possible alternative to their current provisions for interpreting their displays. Touch is a difficult interpretative method for museums to provide. Aside from the concerns with touch facilities listed in the above paragraph, the issue of conservation is imperative in the provision of pieces which visitors can touch.

Museums with permanent historical collections, or particularly 2D artworks, will find touch facilities very difficulty to introduce. Organisations such as The Living Paintings Trust offer alternatives for institutions with these difficulties, but offering only the chance to handle a replica does not meet with visitors' expectations in some instances. The experience is felt "insufficient" and the opportunity to touch the "real" object is still clamoured for. It is possible to touch real objects with the use of gloves in some museums but this can cause concerns on both sides; gloves can still cause conservation problems for the pieces involved, and the ability to touch is impaired by the "barrier" between the hands and the object. When visually impaired visitors enquire if it is possible to touch, the difficulties with this provision need to be sympathetically

explained, so that the visitor is in no doubt that the museum is endeavouring to address the requirements rather than ignoring it.

The volunteers involved in this research presented both sides of this argument. The desire to be able to touch more of the Cramond Lioness, to gain a real "feel" for the piece, was strongly desired by those involved in this visit, and the opportunity to handle pieces from the Museum of Childhood collections in the handling boxes provided for hire was very much appreciated. The other side of the argument was also understood however, that museums could not always enable these opportunities due to concern for the welfare of the collections. All the volunteers certainly welcomed any developments to introduce handling sessions.

To provide a touch facility would widen the scope and potentially increase the audience to a museum, especially visually impaired people. It is far more difficult to attract those who have never had a sense of sight to become curious about institutions such as museums if facilities are not provided which can help them appreciate and become involved during a visit. Any opportunities for handling collections need to be marketed on museum literature and also conveyed to organisations which may have members with visual impairments.

When faced with a situation in a museum where you have no sight orientation, such as in the exhibitions *Dialogue in the Dark* or *Blind Alphabet C*,[19] people seemed to have been made to think about the personal difficulties of coping without sight and how much reliance they placed on touch to orientate themselves. These exhibitions were very educational experiences for sighted people about visually impaired people and the power of touch. It is the issue of education which is the key to encouraging an understanding by the museums of the wishes of visually impaired people to touch collections and also an understanding by visually impaired people of the difficulties museums face

[19] See chapter 4

when trying to offer such an opportunity.[20] The use of touch needs to be understood and appreciated as far as possible within planning for future displays in museums, including staff availability and time, training in presenting pieces to people with visual impairments, and the nature of the touch facilities that are possible.

[20] There are two articles specifically involving touch in the *New Beacon*: A. Millar, *British Museum handling sessions*, vol.64, no.758, June 1980, London, 1980, p.154; and Letters to the Editor, *New Beacon*, vol. , no.869, October 1989, London, 1989, p. 26, a letter concerning the lack of opportunities for touching objects within National Trust properties.

Chapter 11

SOUND

Evocative verbal description can be the key which brings an object to life both to sighted people and those without sight. It can provide information and directions, and enhance atmosphere and drama. Whether such descriptions are on tape or by human guide, they need to be interesting and informative and have a suitable content for their purpose. Verbal descriptions can be used in many situations, for example, on their own, accompanying a handling session, touch tour, or guidance round a tactile diagram. Audio guides are an important way to further the aim of universal communication between the museum and its potential audience as they can be used by and be beneficial to a great number of people.[1] Audio guides for different museums and different exhibitions will require a slightly different approach and content. In some instances, a human guide as opposed to a recorded tour is more appropriate. This chapter investigates recorded tours: the use and content of human guided tours are discussed in the following chapter.

Sighted people take in a great deal of information through their eyes which must be obtained by other means by blind and partially sighted people. The amount of information taken in and retained at one sitting is quite limited, particularly when it is not grounded in visual information which provides an instant image of what is being described. Audio description, therefore, is a very useful interpretative tool for a museum to offer visitors, particularly those with visual impairments.[2] Whilst containing a lot of information, audio description

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[1] The obvious exceptions are people with hearing impairments, but people who use hearing aids can make use of some audio guides.

[2] R. McGinnis, Chapter 28, "The disabling society", in E. Hooper-Greenhill (ed), *The Educational Role of the Museum*, 1999, p.280

needs to be short, succinct, and well prepared. To be sure that audio-descriptions work, it is ideal to test them on a representative group of potential users.[3] This will assist gauging the content and the correct level of information. Everybody's needs do vary and it is impossible to provide the perfect description but consultation will help to raise the profile of the service and to ensure the most useful outcome.

Developing an audio guide is a growing practice in museums, in part due to audio guides being interpreted as a potential auxiliary aid to assist the interpretation of exhibitions, as highlighted in the DDA.[4] There are various sources from which to gain training in producing the content of a guide and various companies which will complete the production. The RNIB and the ADAPT Trust both offer seminars on this subject and the RNIB have produced fact sheets.[5] Again, training is important to ensure audio description is appropriate for users. Separate tours for people with visual impairments, a highlights tour and other types can be expensive, but sufficient training and consultation can produce a tour which will be appropriate for the majority of people.

CONTENTS OF DESCRIPTION

The basic contents of a verbal description should be the type of information found on a wall label, providing visually impaired visitors with equal access to the information available to all sighted viewers, such as the name, title or subject of the work; material or medium; size; the artist, maker or manufacturer and their techniques; and the nationality of the maker or country and year of production. The fieldwork carried out also suggested that people could easily

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[3] The guides for the *Blind Alphabet C* exhibition were happy to do this - see chapter 4 for details of this exhibition

[4] DDA, Part III, Section 21, subsection 4

[5] R. McGinnis and M. Weisen,*Guidelines for describing museum objects and paintings to blind and partially sighted people* ,1994, p.10

assimilate comparisons from everyday life, such as likening size to part of the body, and simple language, avoiding specialised terms, or terms with a literal as well as figurative meaning, are particularly crucial for a good description.[6] Indication of where the description starts is also important, for example whether it starts at the left of the object and moves across. Small areas should be covered at any one time, just a few inches or centimetres and the inclusion of the place of the piece in the gallery within the museum can also be helpful. If the description can be recorded in the museum itself, this can enhance the feel for the piece, using the echo of the building in which it is situated to give an even clearer impression of the surroundings. Music can be added in between the descriptions of individual pieces or galleries as a whole, it might enhance feeling for the period. Care must be taken to describe effectively particular visual phenomena such as light and dark: and reference should be made to other senses if possible, such as smell, sound and taste particularly pertinent to the object. This was something particularly singled out by the volunteers as helpful to complete a description.

Colour was also important: many visually impaired people have a visual memory of colours, or have their own perception of what colours look like, including colour-blind people.[7] The most important skill is to cover the entire subject of the description, ensuring a representation of the relationship between the details, mood and atmosphere of the piece.

Perhaps the hardest objects for a visually impaired person to gain an appreciation of, depending on the level of their sight difficulty, is a two-dimensional piece of artwork; the content of a description for a painting is therefore particularly important. The fieldwork carried out discovered that, as well as describing the contents and historical background to the piece, where

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[6] R. McGinnis and M. Weisen, *Guidelines for describing museum objects and paintings to blind and partially sighted people*, 1994, p.7 The choice of "ungessoed canvas" as an example does not seem appropriate

[7] See chapter 7

appropriate, the content, dimensions, frame, glass, colour, texture and position of the piece in the room in which it is displayed should be included to present as full a representation as possible.[8]

It is usually impossible to provide comprehensive mobility instructions on an audio guide. This is because the needs of visually impaired people are highly individualised. Some tours include the distance between the exhibits, either detailing steps or distance. Everyone's pace-sizes are different and using paces as a descriptive term is inappropriate for wheelchair users. Information to assist orientation should be short and clear. This way, the commentary will not be cumbersome to those visually impaired people who have independent mobility or who come with sighted companions.[9] Directions are sometimes given as compass points, but for that you need to know the exact orientation of the museum, or be told this by an attendant; even left and right relies on you facing the correct way, which cannot be guaranteed without information from another person, or personal vision. It also depends on whether the person with the visual impairment is able to enter through the same door as that from which the tour orientates. If an accompanying map is available, the directions should be clear. Perhaps most importantly, there should be information included in the description concerning reorientation if you lose your way on the tour, and how to use the guide to find your way back to a point of reference.

A tour for visually impaired people specifically should not be a second thought, after tours for the 'general' visitor are made, but should be considered important enough to be made at the same time. A description which assumes the use of the sense of sight does not serve visually impaired people well as they need more detail of all the aspects of what is described. From the above description of the information the fieldwork suggested should

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[8] These details were ascertained from discussions with volunteers, particularly Sheena Craig, herself an audio describer for Edinburgh theatre events.
[9] RNIB Leisure Services, *Making Museums Accessible*, 1995, p.4

be included in a tour, some of the details may seem a little spurious for a tour for the sighted; details of the frame, whether the image is glazed, for example, can be easily seen but it should not be assumed that everyone in the tour party would have a realisation of how the presentation of an exhibit was almost as important as the piece itself, and therefore this could add interest.

USE OF THE AUDIO GUIDE

A simple to use audio guide is as important as the content. The main useful feature indicated by the volunteers in this research was the raised "nodule" found on a number "5" on a telephone. Once this button is located on a keypad, it is easier for people with visual impairments to navigate round the other keys as the pattern of a keypad can be memorised by constant usage. Some audio guides do favour the "telephone style" handset so this information is particularly useful for their design. Even if a number keypad is positioned in a linear style, if the nodule is retained on the number "5", navigation can still be enhanced for people with visual impairments. Obviously, buttons other than those used for numbers will be expected on audio guide keypads. It is important that these are given careful thought as to their position so as not to confuse navigation of the numbers. The volunteers advocated the use of a raised symbol akin to the pictorial images currently expected, for example a raised square for the stop button and an arrow for play. Colour is also important here, perhaps red for stop and green for play.

Whilst people with visual impairments would like every object in a museum or at least each room in a museum or gallery to be included in a tour, this is mostly impractical for most museums and galleries for reasons of funding and staff time, and, indeed, such a tour in many cases would be extremely long. The mechanics of setting up an audio description service can be difficult in an

older building where rewiring can be difficult.[10] To install an audio system to an existing building, be it 'audio' in the sense of improving volume for hearing impaired people, or 'audio' in the sense of an audio description service for visually impaired people, is expensive and time-consuming, and is consequently often resisted; other 'suitable aids' are attempted. Listed buildings are in some respects exempt from such alterations but new buildings can have provision of audio facilities factored into their development.

Audio-guides are not infallible. Extraneous noise during a museum visit can interfere with listening to the guide, confusing the user as to which comments are from the guide and which are from a passing fellow visitor, or an announcement made in connection with another exhibition. The machines can break down and this can cause embarrassment for a user, particularly someone who has difficulty in seeing the controls; it could be perceived that it is their inability to operate the guide rather than a technical fault which is the reason for failure.

Audio tours can overcome the feeling of isolation that many visually impaired people have when they feel their enjoyment of something is inferior to that of sighted people.[11] It is something they can come to a museum and operate personally: audio guides enable them to join in conversations about museum visits which they would not otherwise be able to contribute to, giving increased independence from family and friends when visiting museums, and audio guides could also increase confidence to attend venues more frequently. This could help boost museum audiences from this traditionally minority group. The tours could be used by people other than those with visual impairments, including elderly people and children.

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[10] The Building Standards Act (Scotland) 1990, by which all new buildings in Scotland must abide, states that there must be suitable aids for hearing impaired people in auditoria and conference halls of floor area exceeding 400m^2 and situations where the public is separated from a vendor or service provider by a glazed screen.

[11] Some people feel that tours can remove them from the full experience of visiting a museum - see chapter 12

PROVIDERS OF AUDIO TOURS

Four companies were encountered during this research.[12] Three of them produced the audio guide mechanism itself as well as devising the tour content.[13]

The Dog Rose Trust

The Dog Rose Trust is committed to making all public buildings as accessible as possible to people with visual impairments. They work with visually impaired people to produce their tours which are sometimes accompanied by tactile models. They have worked in Scotland producing a tactile model in conjunction with an infrared controlled audio tour of St Mungo's Cathedral in Glasgow. The Dog Rose Trust very much advocates consulting with people with visual impairments to produce the most appropriate tour, using suitable language and clarity of description, and is specialised in this area.

Antenna Audio

Antenna Audio, based at Edinburgh Castle, is the British arm of American company ACT. This audio tour uses a CD ROM which hangs on a strap round the neck to leave the hands free, particularly useful for people with mobility difficulties or visually impaired people who use a white cane. A headset is worn over the head and the ears. The guide has to be set up by a warder and there are no pause, play, rewind or volume buttons. Braille is used above the numbers which are used to select the different commentaries, and the numbers are positioned in a linear keyboard across the top of the box. Another omission from the design is the use of a 'nodule' on the number '5'

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[12] Recently, a fifth company has been formed which provides audio tours to museum. This is Flexleigh Audio - www.flexleigh.co.uk This company has worked with several museums in England and is able to provide script writers, a sound studio for recordings and simply operated products.

[13] The museums in the fieldwork sample used the three companies who produced general tours.

which is even more important to include where a linear system as opposed to a telephone keypad is used. The numbers on top of the keys were white, a good contrast with the black buttons, but the numbers were not raised, which would again have been useful. There is also an illuminated LCD screen which will display up to two pages of text in black type against a green screen which provides a good contrast.

The guide also has the ability to record how often each number for every object is accessed, therefore enabling curators to keep a record of the popularity of the exhibits. There is no requirement for wiring or other installation within the fabric of the building, and so this is a suitable guide to add to even permanent exhibitions when they have been installed for several years. The guide can play for eight hours without charge and recharges on the stand whilst waiting to be used. The guides are easy to reprogramme and each number used for an object on the commentary can be reprogrammed separately so the same objects can be used on different tours without changing the data on the CD. Antenna Audio have their own recording studio so they can complete the product for the museum. Antenna Audio are now pioneering a new guide, the X-plorer, which fits in the palm of a hand and can be held to the ear or used with headphones; this, after the results of my visits, will have the nodule on the number "5".

Soundalive

The Soundalive guide, used in the Royal Museum of Scotland, is one of the fourteen models from the "Interpreter" range produced by the company, which are styled as telephone receivers and have the traditional nodule on the number '5'. This guide can hold 340 minutes of commentary and over 999 different descriptions, providing a great deal of scope. The Soundalive guide is held to the ear and so is more difficult to use by a person with mobility difficulties or if a white cane is needed by a visually impaired person. Braille and raised numbers are not employed but there are buttons for fast forward and rewind, and the buttons are red and so stand out clearly from

the black surrounds. This guide has a 10-hour battery life and recharges on the stands used for storage. Soundalive have their own studio to record and use native speakers where appropriate for authenticity.

Acoustiguide

The Acoustiguide, allegedly used the "...enthusiasm, passion, personal opinion, speculation, humour..." of the spoken word to convey information about the museum objects.[14] The company have their own studio to produce the text for the guides. The guide itself is again a wand-shaped device and is held to the ear rather than needing headphones. The tours can be reprogrammed at the museum and the pattern of use of the guides can be recorded so that the effectiveness of the tours can be assessed. A linear tour can be used or random access of objects can be utilised also. Acoustiguide believe an infrared activated system is not so successful as it will not work outside or in a room with much daylight.

OTHER USES OF SOUND

Audio-description can be used in various appliances in a museum and gallery. A lift should have some sort of audible warning of doors closing and of which floor it has reached. Talking Newspapers can be used as a marketing tool, but are not widely used by museums. However, people with visual impairments do prefer to receive their news through the usual channels so Talking Newspapers may not make a great difference to the size of a museum's audience. "Newspeak" is another type of magazine which would advertise things in their "coming events" section. VISSES news will also inform people. There are about 30,000 charities in Scotland, most of which have their own talking newspaper. The Scottish Guide Dog Owners Association send out 2-3 tapes per year.

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[14] Antenna Audio, *The Gallery Guide* - literature, London, 1998-2000, p.2

Lectures given during seminars could be audio-described if abstracts could be included in literature circulated beforehand, negating the problem of slides, which are usually not elaborated upon verbally. Cassette guides which include commentaries on the exhibits by visually impaired people are often of interest to sighted people, bringing their other senses into play.[15]

Another suggestion for the use of sound by the fieldwork volunteers was to use an audio comments book. As much as an audio tour can give visually impaired visitors information about an exhibition, they want to leave their own comments too, although there could be a problem with ensuring the privacy of such comments.

There was initially no audio version of the white paper on devolution. The reasoning seemingly was that there was not enough money or demand; however, there was a Gaelic version and the Gaelic-speaking population is a smaller proportion of the population than that of visually impaired people.

FINANCE

The resources to fund some touch facilities is a consideration and enquiries as to cost from advertisers of the equipment were not very fruitful and even an estimated figure was not forthcoming. It can be surmised, however, that the cost would be proportionate to the number of guides required.

Distribution can be made cheaper by Articles for the Blind labels which allow free postage and can be organised, for Edinburgh museums, from VISSES for £2 for 100 - they can be reversed for return postage. There is the possibility of using the Central Office of Information. For £1000 per annum it will produce information to the public in Braille, tape, disc and large print at reduced

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[15] RNIB Leisure Services, *Making Museums Accessible*, 1995, p.6

prices. Use could also be made of the Scottish Braille Press, although the cost could still be prohibitive. The easiest way to be kept informed about audio-described performances in theatres is to be included on their audio description mailing list; perhaps museums could investigate this idea. The majority of visually impaired people own a tape recorder, so use of sound as a marketing tool is an acceptable way to offer information.

FIELDWORK

Provision of the option of audio interpretation for exhibitions could always be seen as an example of 'good practice'. However, as the research highlighted, to be successful, audio interpretation has to be presented carefully and in a considered fashion.

There was minimal audio provision in the museums visited in the course of this research. It was only the national museums and galleries which provided any regular audio provision. All the audio guides had printed literature with them.

AUDIO GUIDES

CONTENT OF DESCRIPTION

The Museum of Scotland used audio guides provided by Antenna Audio. The content of this tour was described by the volunteer as easily understandable with an interesting commentary.

The Acoustiguide at the National Gallery of Scotland received similar praise. The voice used was clear and easy to listen to and the content of the tour was on the whole good, describing the images within the paintings clearly. There were no orientation instructions in this tour as it operated by the user finding a white label below a painting which indicated a number to key into the keypad. This allowed a freedom of choice in using the description without being reliant on the guide for orientation within the museum. Despite comment that the content of the tour was good, the volunteer would have preferred more information about the Gallery itself, both the history of the building and the situation of the paintings described within the actual galleries.

The content of the tour at the Royal Museum, however, was not praised as it was not kept up-to-date with the continuing development of the Museum of Scotland and was also guilty of mentioning navigating by way of stairs but did not offer the alternative of a lift. The descriptions included in the tour were described as passable but the volunteers felt there was insufficient detail on each object. The assumption was also made that entrance was by Chambers Street when people with wheelchairs had to enter from Lothian Street at the time this tour was completed, therefore the navigational details given were incorrect.[16]

USE OF EQUIPMENT

The Acoustiguide was shaped like a telephone and was described by the volunteer as easy to hold. Navigation around the contents of the tour was quite easy using fast forward and rewind keys and a stop/pause function. The choice of the order of the descriptions was left to the user, rather than imposed by the system. However, there were no raised numbers or Braille to assist with use of the buttons. Finding the correct key to press proved difficult without these features.

At the Royal Museum, the Soundalive guide was also shaped like a wand but proved more difficult to use than the Acoustiguide in terms of its content. The stop/pause function was explained within the start of the tour but the explanation was too complex to enable successful operation.

The content of the tour on the Museum of Scotland Antenna Audio guide included directions but there was no way to move randomly from object to object without becoming disorientated. There were no fast forward and rewind buttons on the guide and during the volunteers' tour the apparatus broke down and would only operate on one setting.

[16]A map of the museum was provided with the audio guides but this did not assist with the difficulties of orientation. There was nothing on the map to indicate the direction of West or East and map was illegible to the volunteers on this visit and no alternative was offered.

INFORMATIVE SYMBOLS

Linked to the use of the guides is the legibility of the symbols to state whether an object is included in the tour. Symbols showing which objects have an audio-description available need to be clear and obvious. The Royal Museum used either red dots or blue triangles; the colour choice was good and bright but the symbols were now faded and barely visible in most cases. The symbols are low down, very small and not tactile.[17] (Figure 72)

The fat arrowheads in the Museum of Scotland did not seem a suitable choice as an arrowhead is normally accepted as a directional symbol and not easily assimilated to be informative. The Highlights tour was meant to be for people in a hurry; during one visit, only two symbols could be found in an hour. The symbols were too small, even though there was an expanse of label which could be used. Orange, blue and green are used for symbols to show the different objects described on each tour - Highlight, Gaelic, English - commonly colours which cause problems for people who are colour blind.[18] The positions of the symbols on the label had to be remembered sometimes to work out which tour the symbol is for, especially in cases where the lighting is too poor to see the colour. Nor are the symbols tactile. Symbols which are a shape and a colour would perhaps be more appropriate. (Figure 73)

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[17]See chapter 7
[18]Ibid.

Figure 72 - Symbols indicating that information is available on audio guides, Royal Museum of Scotland, Edinburgh

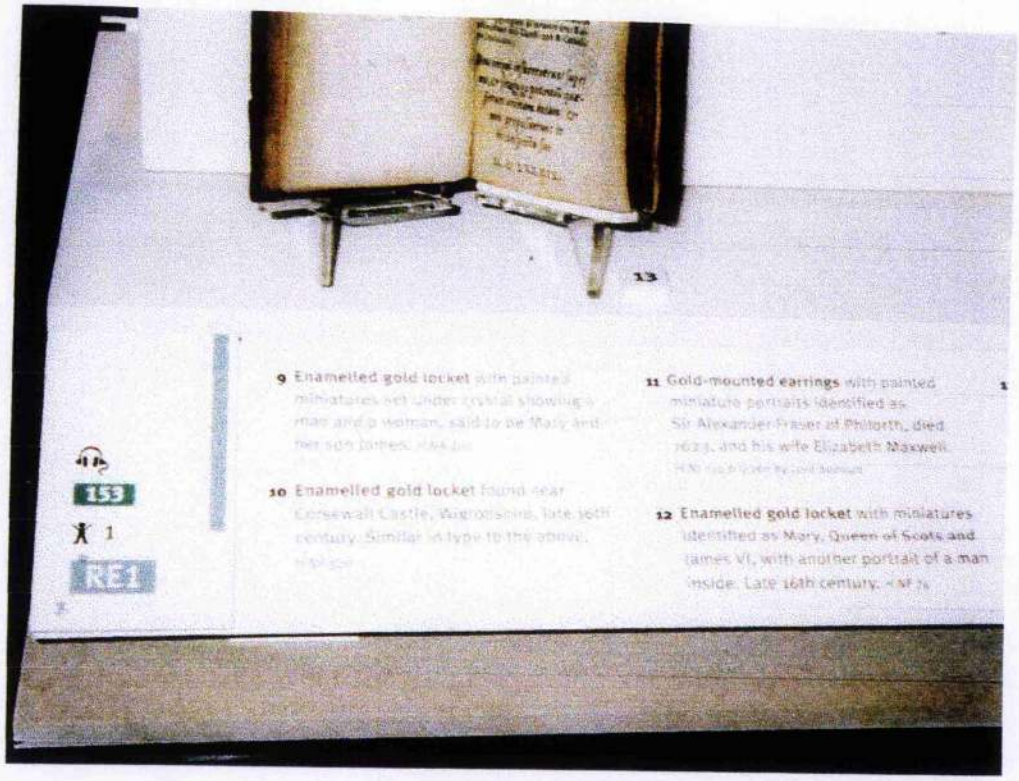

Figure 73 - Symbols indicating that information is available on audio guides, Museum of Scotland, Edinburgh

ADVERTISING

Audio versions of marketing literature are also important and were being evaluated at the National Museums of Scotland. A bimonthly Highlights leaflet is produced here and this is now being translated onto tape; hopefully this will increase visitor numbers and distribution by word-of-mouth.

WARNING SYSTEMS

During a survey completed in 1998, most of the museums in Fife had audible emergency warning systems. The volunteers did not pass comment on audible emergency warning systems in any particular venue, but did suggest that such provisions were essential.

Whilst all museums used in this research had, or can be presumed to have had some form of audible emergency warning system, there are other specific areas in museums where people with disabilities would appreciate some mechanism to summon aid quickly. Two such areas are lifts and toilets. In December 1998, the recently opened Museum of Scotland's lift did not have a vocal announcement feature to alert users to the location of the lift, but the facility was in operation by February 1999. The improvement in the situation was lauded by the volunteer as it improved her feeling of orientation during her visit.

Toilets were tested at The Museum of Childhood and there was no audible alarm bell in case of emergency. This had been noted as an omission by curators but had yet to be corrected.

OTHER USES OF SOUND

Sounds within a museum can prove to be helpful factors for orientation. The noise of the fountain in the entrance area, and the humidifiers in the Murray Room, at the Aberdeen Art Gallery were suggested as potentially useful to visually impaired people as assistance with orientation, particularly the fountain for the entrance and exit.

Handling boxes were also provided at The Museum of Childhood. These are discussed further in chapter 10 but the volunteer noted that sound could have played a part here. The box viewed was to be used in reminiscence sessions and contained a book of old nursery rhymes and a skipping rope. The volunteer noted that a tape with the nursery rhymes being sung would have been useful to "illustrate" the songs described.

CONCLUSION

Audio guides are listed as an example of an auxiliary aid in the DDA Part III so they clearly come under the definition of interpretative aids which museums should be considering to supplement their exhibitions.

Audio description was encouraged by the volunteers as a method of understanding museum display. Museums included in this survey were positive about the development of audio provision but were concerned about cost and time restraints. The DDA, despite the mention of audio guides within Part III Section 19, does not therefore demand that sound is added instantly to museums, but it does raise the importance of its consideration and the appreciation of its possibilities by museums.

Audio guide provision itself is not essential but the potential of sound should not be underestimated by museums. Sound can be utilised in other ways, including the use of "human" guides, as is presented in chapter 12, and the use of sound for marketing. Visually impaired people have become used to relying on the radio and television, rather than newspapers and magazines, to find out news in general, or to find out about leisure opportunities. Opportunities for such methods of advertising should be explored by museums.

Audio guides, if they are to be offered as a method of interpretation for exhibitions, need to be properly researched to be as effective as possible. The equipment is not faultless and does require maintenance to prevent it failing in the middle of a tour. Training in the use of the guides should also be given to staff in case visitors experience any difficulties. Research into audio provision includes finding the correct provider and undertaking training in the art of audio describing, if not for the purposes of preparing an audio guide

then to understand the construction of an audio tour and what items should be included in it. This will assist with the provision of tours by museum guides also, as described in chapter 12. To produce the best tour, collaboration between the company, the curators and a representative group of visitors, is necessary.

Audio-description is an ever increasing industry and there are various organisations which offer such training both specifically for museums and also for other visual arts institutions, including cinemas and theatres. The Audio Description Agency will provide training courses and information about existing audio projects, particularly in cinemas. There is a developing process called 'Cinetracker' which originated in Scotland by Wintonfield Systems. The aim is to produce a CD synchronised with an audio description for a film. Film producers and writers can discuss the script with the company before the recording. International Audio Describers Agency, based in Perth and headed by Carol McGregor, is working in tandem with Cinetracker to promote this service.[19] At the current time, alterations are having to be made to the design, but the ethos of the idea remains the same. A similar situation could be engendered for an audio visual in a museum or gallery to go alongside videos and films. The Edinburgh Festival Theatre has a group of audio-describers who are hoping to have National Guidelines established. It may be possible to forge some links with this group for the museums in Edinburgh, and to encourage other areas of the country to adopt the practice of gathering groups of describers together to assist in the development of audio guides.

Sound can be an important method of including new audiences into museums, particularly visually impaired people. Museum professionals, when seeking to find new ways of making collections appeal to those who might not normally visit, could find sound a useful, and potentially versatile aid.

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[19] Correspondence from Carol McGregor, 21st November 1999. Carol McGregor has been a theatre audio describer for 7 years. The concept of an agency for audio describers is a new one and will ensure that the quality of descriptions is of a high standard.

Chapter 12

GUIDES

Guided tours can be an important addition to a visit for a visually impaired person. Unlike an audio guide, however, the provision of a human guide depends upon having appropriate and available staff or volunteers. Front of house staff in a museum are usually the first point of contact for visitors and as such their existence and the standard of their training is very important to the perception of a museum to a visitor and to the enjoyment of a visit.[279]

Human guides are obviously more versatile than an audio guide as they can stop and start whenever requested, can repeat and add more detail. Questions can also be answered as the tour proceeds and the variety of information on offer can be tailored to each individual enquiry. Indeed, for some, the audio-guide provokes a feeling of being "disenfranchised" from the experience of the visit, the earphones or ear-piece placing the wearer into their own world, oblivious of anything else going on around them. The comments of other passing visitors can enhance the experience of the visit in some ways and the audio tour removes this possibility. However, guided tours are not without their problems:

> With [guided tours], although they have a place, they can make people feel slightly patronised and marginalized. It is better to have several items that can be touched or have audio-description or raised diagrams to go with them on offer all the time.[280]

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[279] R. McGinnis, Chapter 28, "The disabling society" in E. Hooper-Greenhill (ed.), *The Educational Role of the Museum*, 1999, p.280

[280] Letter from June Bretherton, 27th January 1999. The Bretherton Consultancy were responsible for the introduction to the UK of *Dialogue in the Dark*. See chapter 4 for further details about this exhibition

There are advantages with an audio guide. It can be done at the visitor's own pace as it is a personal experience, not one that has to be shared with a group of others; it is possible to arrange individual guided tours, in some cases, but these will be more difficult due to staff availability. Similarly with the audio guide, visually impaired people would prefer that there was a guided tour available for every museum, or every gallery within a museum, and that each object was included. Sometimes an audio tour can be enhanced by a guide, but their comments can become confusing when differing from that of the audio description. Touch tours, however, can be usefully enhanced by a guide.[281]

Sighted guide training can be received at local RNIB organisations or a representative of the RNIB can provide training at a museum. This can encompass the type of things that should be said and the appropriate guiding techniques.[282] There are various things that should be remembered when conducting a guided tour[283]: give directions, speak clearly and in plain language, describe shape, use gestures, describe size, describe colour, interpret labels, give information concerning amenities for visually impaired people, know the museum, and last but not least, think round questions that may be asked about the subject. Most importantly, if tours are available, the visitors should be advised. A further consideration for the provision of staff is that disabled people do not always visit museums and galleries with companions. People with visual impairments who use a guide dog or a white cane can visit on their own, as can those who have more minor visual difficulties. Once within the museum, however, assistance from a gallery attendant may be required.

If guided tours are a new service within a museum, it can be difficult to encourage people, with disabilities or otherwise, who would prefer a guided tour, that there now is a reason to visit the museum. Spontaneous visits

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[281] See chapter 9

[282] R. McGinnis, Chapter 28, "The disabling society" in E. Hooper-Greenhill (ed.), *The Educational Role of the Museum*, 1999, p.281

[283] See chapter 11 for further details concerning tours using audio guides.

to museums tend to be made less frequently by people with disabilities than by able-bodied people because museums, primarily because of their historical nature, are viewed as inaccessible buildings. Publicising the provision of guided tours is therefore important and perhaps also the advocating of a phone call in advance to enable staff to be prepared for visitors if their assistance is required. The smaller the group the better for a guided tour, especially for visually impaired people. These tours could be sensitively advertised to attract more interested parties. There is the issue of separate tours - but when a standard tour is evidently deemed not suitable by the very provision of a tour for visually impaired people, this latter tour should be adequately promoted.

Services other than tours around the galleries are provided by museum guides or curators in person. Lectures are one such instance and provisions need to be made for visually impaired people regarding textual information produced for these, the descriptions of slides used, and space for guide dogs and similar requirements. Timing of lectures is also important; many lectures are scheduled for early evening but these times are not always convenient for travel arrangements and many visually impaired people prefer not to travel after dark when they feel even more vulnerable than sighted people. Scheduling during the day is perhaps an option to consider, although this causes problems for people who work, which many visually impaired people do.

The problem raised with having tours for people with visual impairments during the day, particularly those involving touch, was that it would encourage every visitor to touch, so the tours would have to be before 9.30am or after 5pm. Early tours are obviously difficult for staff and visitors alike, and tours after 5pm generate the problems of travel discussed in the above paragraph. Tours during the daytime also created the concern that the participants would become objects of curiosity to other visitors. Sunday morning might be a suitable alternative, although this again would cause difficulties for some potential participants.

Some of the museums visited for this research did provide guides to help interpret displays. All had at least one guide available in the galleries but it depended on the size of the museum exactly how much assistance the guide was able to offer.

Several of the museums and galleries visited provided for one type of guide, the guide dog. There are approximately 4,000 guide dog users in this country, a small fraction of the total number of visually impaired people. But for those who do have guide dogs, they are an invaluable aid and companion and to separate them will leave the owner less independent. Museums should endeavour to accommodate them.[284] The Guide Dogs for the Blind Association has a similar aim to the RNIB to increase the opportunities for people with visual impairments in society and improve their quality of life.[285] If there are any circumstances when a guide dog cannot accompany its owner, it should be made clear in all publicity material. Guide dogs will normally accompany their owners to events such as lectures and talks, so space should be accommodated in any seating areas for this possibility.

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[284] R. McGinnis, Chapter 28, "The disabling society in E. Hooper-Greenhill (ed.), *The Educational Role of the Museum*, 1999, ", p.280

[285] L. Ramrayka, "Walk the Talk", *The Guardian*, Wednesday June 13th 2001, p.9

FIELDWORK

GUIDED TOURS

Good practice could be defined as providing guided tours regularly and bad practice would not be to do so. However there are various reasons as to why providing tours might not be possible for museums. The examples cited below perhaps highlight both good experiences of warders in museums, and difficulties experience by the volunteers.

Warders at Perth Museum and Art Gallery are present in the entrance area and are able to provide assistance to any visitors experiencing difficulty during their visit. The Fergusson Gallery also had staff available to help if required.

Aberdeen Art Gallery and the Marischal Museum do not have enough museum staff to organise guided tours. The McManus Galleries in Dundee has few warders, which is a potential problem if a visually impaired person or any visitor became disorientated in the galleries, or indeed wants to ask about an object on display. Guided tours for all visitors are possible by arrangement.

Crawford Arts Centre, St Andrews Preservation Trust Museum and Garden, Fife Folk Museum, Scottish Fisheries Museum, Inverkeithing Museum, Andrew Carnegie Birthplace Museum, Dunfermline Museum and Small Gallery, Pittencrieff House Museum, Dunfermline Museum and Small Gallery offer tours for visually impaired people and people with other types of disabilities on request. St Andrews Museum will also do tours for all if asked, as will the Laing Museum, Newburgh. The Collins Gallery had staff who could provide an impromptu guided tour if requested on the day, or could organise

one in advance. Kelvingrove had warders available who could assist a visitor and provide information about exhibitions.

Guided tours are held at the Museum of Scotland twice a day and cover different areas of the museum. There are also special highlights tours and some afternoon tours in the Royal Museum, the earlier one being bookable and on a specific topic. The bookable tour at the Museum of Scotland has an admission fee; a tour of one type or another is the only way of making the museum accessible to people with visual impairments so charging for this group of people is a contentious issue.

STAFF TRAINING

Staff training was also an issue raised by the volunteers as a result of the visits.

The Museum of Childhood provided an enjoyable visit; one of the curators was available to show us around a few of the galleries without prior booking. The volunteer's comments on the large print and braille leaflets, which the warders were able to provide her with, were sought, rather than such information just being handed out without comment. These leaflets were clipped to prevent scattering if dropped on the floor. The attitude displayed was much more amenable, and they spoke with positive use of language; the volunteer was offered both braille and large print if "it's appropriate" - very few people communicate in such a manner and do not think to offer both, usually only assuming one or the other, not realising that not all visually impaired people read Braille. The warders on duty at the desk during the visit happened to be from the local area, were very approachable, and willingly offered advice on the location of an accessible cafe.

The National Gallery did provide an audio tour and the attendant encountered here was much more comfortable in dealing with a visually impaired visitor and a guide dog.[286] The attendant described the guide as like a phone, guiding the volunteer's hand round the position of the numbers. The map, not a tactile one, was also explained and the symbols indicated. There were numerous warders available who seemed quite relaxed with a visually impaired visitor.[287]

One of the warders at the Scottish National Portrait Gallery was asked about tours as there was no touch or audio facility at the gallery. He addressed myself rather than the volunteer which was not felt appropriate; just because someone cannot see does not mean that they cannot tell when someone is looking at them or not talking to them. Direction of sound and words chosen can easily be detected. The warder did, however, suggest an alternative involving contacting the Education Officer who could arrange a tour at a convenient time.

On the visit to the Portrait Gallery and the National Gallery, the volunteer asked the shop assistants to describe what they had for sale. The assistant in the Portrait Gallery was reluctant to give information but did talk to the volunteer and look her in the eye: many people encountered would not do this. The assistant did not obtain an object to show the volunteer or allow her to touch anything. The experience at the National Gallery was similar.

In the Royal Museum, the gallery attendants were helpful, chatting to the volunteer when she was apparently without assistance. However, there were no staff in the upstairs galleries to help with the audio guide. We were eventually advised that some objects were unavailable on the tour, but the staff did not know the tour well enough to realize it included directions which were now

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[286] The museum guide in the entrance hall offered the possibility of a bowl of water for the guide dog if required.

[287] See chapter 11 for further details about the audio guide encountered during this visit.

out of date due to the building of the Museum of Scotland. The staff did not inform us about the tour for visually impaired people, despite my telephone call; this tour was only discovered because I could read the small print on the printed guide accompanying the standard tour we were given, nor were we shown how to use the guide. The ups and downs of this experience caused the volunteer visitor to feel completely disorientated and the enjoyment of the visit was diminished.

At the Museum of Scotland there were few guides in the galleries to help with the audio guides and it was a journey through a labyrinth of 'obstacles' to find your way back to the desk. Maps were not given out with the audio guides, and nor were large print leaflets offered. Also it was not pointed out that we were already on level 1 which caused an avoidable trip in the lift. We were not informed how to find the objects on the tour nor how to return the audio guide to the desk if there was a problem, nor where there were any seats to sit on whilst trying to understand the tour. A choice of tours was not offered: neither of us wanted the Gaelic tour which was issued to us, and one audio guide provided would not reprogramme. We were not informed that the warder had to do the programming. The warder appeared to be depressed in spirit, distracted and embarrassed, and blamed children for any fault with the machines.

GUIDES WITH VISUAL IMPAIRMENTS

This was only found on one occasion during this fieldwork. The Royal Museum hosted *Blind Alphabet C*, using visually impaired people as the guides, which was a new idea for the museum. The guides who offered to assist here had never done this before either, and sighted guides needed to be available to orientate and inform them of their surroundings. There was concern amongst the visually impaired guides that they could not find the objects they were meant to be showing to the visitors and the sighted guides were

expected to assist with this. The echoing voices round the entrance hall were also a problem for the visually impaired guides to tell if they were being addressed. Some of the people who had visited museums as volunteers would not take part in this exhibition, indicating different views concerning the highlighting of their disability. The visually impaired guides were unsure about whether to do this again, although they enjoyed it on the whole, but did want to remain proactive in the museum in some way; there was a reticence to suggest new things to do but this is probably because they had not had a previous experience of this opportunity. The exhibition had appealed to people from the Royal Blind School and had introduced some children to guide dogs and helped break down the barriers and the perceptions between sighted and visually impaired people surrounding who guides whom.

LECTURES

The National Gallery of Scotland and the Collins Gallery offer regular lunchtime lectures. This is a preferred time with the volunteers as travel can be completed during daylight hours, although it may prove difficult for people who work.

The traditional evening lectures at the Royal Museum when the rest of the museum is shut are not popular with visually impaired people due to a general dislike of night travel, and the distances some people have to cover.

GUIDE DOGS

All museums visited for this research admit guide dogs, an undoubted example of good practice in this area for people with visual impairments.

CONCLUSION

The common perception is that guided tours are the easiest provision to make within museums to comply with the DDA Part III stipulations of providing auxiliary aids. The staff are already in the museums after all, but this chapter, and to an extent the previous chapter, illustrate the difficulties with providing adequate guided tours for visually impaired people.

Availability of staff and adequate training were the main problems encountered by the volunteers. All the volunteers would like to have the opportunity to have guided tours of museums but it was understood during the visits that resources could prevent this. However, training museum guides in 'disability awareness', as such training is usually termed, is certainly one way to encourage people with visual impairments to become part of the museum audience. In this way, tours could be organised of individual galleries and could be conducted in a manner which people with visual impairments would appreciate. Such a provision would comply with the DDA, please audiences, and would be a minimal burden to resources. Marketing of these type of events to target audiences could assist museums in attracting and including people who might not usually feel a museum has anything to offer them.

The training will indicate the importance of clarity of speech in someone presenting a tour and the need for some knowledge of what is being presented to enable the guide to answers questions from curious participants. This does not mean that the guides need necessarily be curators themselves but some knowledge about the subject-matter is helpful. A knowledge of the types of requests which may be made by a visually impaired audience particularly is also useful, for example requests to touch exhibits. Such requests, if they are impossible to grant, need to have the reasons for the refusal sensitively explained.

Despite the problems with offering the opportunity for guided tours, museums should certainly look into issues of disability awareness training so that assistance can be offered if required to visually impaired visitors in an appropriate manner. If this is provided, the experience of the museum visit will be greatly enhanced and may encourage return visits or spreading the word to other visually impaired people that the museum in question has knowledgeable staff who make visits by people with disabilities enjoyable. Alongside the enhancement of basic textual information, the provision of guided tours, or at least knowledgeable guides who might be able to assist visitors, is one of the easiest interpretative aids to provide of those highlighted as beneficial by the volunteers in this research. Such tours should be looked into as a priority for museums seeking to increase access to exhibitions and to improve the experience of a visit for people with disabilities, as it will go some way towards satisfying the DDA Part III requirements.

CONCLUSION

People with visual impairments can form an important part of a museum audience and can gain great benefit from visits to museums but only if they are provided with sufficient encouragement to attend.

This is the salient point to emerge from the research, and was very much the sentiment expressed by the volunteers who assisted with the museum visits. Museum professionals also expressed a wish that more people with disabilities would join the museum audience. The research however proved that there was a deficiency between how visually impaired people would be attracted to visit a museum and what was actually being done to encourage them to visit. How museums 'encourage' people with disabilities, particularly those with visual impairments, depends on the view and perception of the disability.

A museum can provide the opportunity for people with disabilities, or from any sector of the population who do not commonly visit museums, to become members of their audience by facilitating access to the building and exhibitions. The fieldwork completed during this research has shown that it does not necessarily require an enormous change in policy to start the process of inclusion. It requires commitment, focus and the incentive to make a change. It was discovered during the course of the research that there are still prevailing attitudes of amazement that someone with a disability, particularly an impairment of vision, should want to visit a museum because they cannot see what is on display. In fact, there are many people with visual impairments who would love to experience what a museum has to offer, but the current difficulties of access and sourcing information about exhibitions prevent this increase in participation.

Social exclusion has been discussed in chapter 1 and Tony Bennett presents an impression of how museums have developed and the different role they come to play in society, an educational role and a desire to be open to more people.[1] Museums cannot "cure" social exclusion in its broadest sense, but they can play a part in increasing access to cultural knowledge and improving the education of the many groups in society who are not 'traditional' visitors. This is a socially inclusive practice which should be developed, and will be of benefit to museums, as well as the new audiences they will attract, in increasing their appreciation amongst different communities.

For some, museums' place in social exclusion is contentious, but this research illustrates that there are simple ways in which people with visual impairments, who don't form part of the 'traditional' museum audience, can be attracted into the museum space and encouraged to use it to their advantage, for education, leisure, social interaction. Issues of physical access are presented in this thesis and illustrate that simple changes to the presentation of existing displays and building design can encourage people with visual impairments to feel welcome and that there will be something there for them. Museums can therefore address aspects of the social exclusion of people with disabilities with adaptations which will in fact assist all visitors and will not result in the "dumbing down" which some fear.[2]

The suggestions made by the volunteers who participated in the fieldwork show that improvements can be made in each of the topic areas to increase access for people with visual impairments. Chapter 6 indicates the importance of the design of every element of a museum building to visually impaired people when they visit a museum. As stated in the course of that chapter, provisions under the final part of the DDA to be enacted in 2004 are not considered, but the examples of good and bad practice evidence the

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[1] T. Bennett, "Pedagogic Objects, Clean Eyes, and Popular Instruction: On Sensory Regimes and Museum Didactics", *Configurations* vol. 6, London, p.345-371

[2] J. Appleton, "Museums for The People?", 8th November 2001, as cited on website, www.spiked-online.co.uk/Articles/00000002D2BA.htm

importance of consultation with people with particular needs when visiting a building and how, in fact, these requirements can assist access for many more people.

Chapters 7 and 8 work in part in tandem with chapter 6 to show the importance of colour and lighting to enhance building features and therefore assist navigation around a building. These chapters also discuss the presentation of exhibitions. Chapter 7 illustrates the understanding required of the use of colour and tonal contrast in all elements of a museum building and exhibition presentation, for example to improve the legibility of labelling, signs, advertising leaflets, definition of exhibits from the case background. Museums do not have to give the impression of "rainbows" in their design, but the consideration of colour and contrast is evidenced as important to encourage visitors with visual impairments into museums. Chapter 8 complements this, describing the importance of the positioning of sources of light to enhance visibility and therefore improve ease of movement around buildings and appreciation of exhibitions, emphasizing avoidance of glare and reflection, and the potential conflicts with the lighting levels desired by people with visual impairments and conservation and aesthetic principles. If such conflict is explained clearly, visitors who would prefer higher levels could understand the need for compromise and would not feel that their wishes were being ignored.

Chapters 9 to 12 concentrate on interpretative features of museum exhibitions. Each chapter indicates the areas which should be considered and provides examples of good and bad practice which should, and should not, be followed. Chapter 9 dispels the myth that the only way to provide legible text for visually impaired people is to provide Braille, although this provision should still be considered. Content of labels was not discussed here, but simple suggestions to improve accessibility are made, for example using an appropriate text size and plain style, avoiding the use of distractions such as underlining and italics, developing a standard of presentation to be

followed throughout a museum, offering photocopies of leaflets and labels in large print to be taken away by visitors or used during a visit. Colour contrast as discussed in chapter 7, is important here also. There are several sets of guidelines referred to in the body of the thesis for the successful design of accessible text and these should be employed by museums.

Opportunities for the use of touch are more problematic than improving text design, but chapter 10 includes, for example, the possibilities of the presentation of relief images of artworks and tactile signage. Both may require specific consideration concerning budgeting, but will greatly assist the appreciation of a visit by people with visual impairments. Chapters 11 and 12 focus on the use of sound to facilitate access to museums, be it by means of an audio guide, or a human guide. The latter is perhaps the most essential provision for a museum as staff with disability awareness training can enhance any visit for visually impaired people and immediately create a feeling of welcoming and belonging. Audio guides present similar concerns as the provision of touch in terms of cost, and also provide extra difficulties of maintenance. Such provisions must be assessed carefully but the opportunities they provide to increase understanding of museum exhibitions should encourage their development wherever possible.

To encourage the adoption of good practice as outlined in chapters 6 to 12, museums should take advantage of the guidance available from organisations included in this research. MAGDA, the RNIB, and similar organisations referred to in the body of the thesis provide information leaflets which are readily available, and for the most part are free. MAGDA offers an email-group service for the sharing of ideas and queries which can prove a useful resource for all sorts of information.[3] This is administered by Re:source, which indicates the importance placed on such issues by the Council for

[3] See www.magda.org

Museums, Archives and Libraries.[4] The RNIB provides a link to the Website Accessibility Initiative where the guidelines discussed in chapter 9 can be found.[5] The development of the internet as a research resource has meant that information relevant to improving museums for people with visual impairments can be located quite easily. A mechanism for contacting museums should also be investigated by the disability support organisations as not all institutions will have access to the internet. Groups such as the RNIB have organisations in many areas and they could approach museums to offer assistance and ensure they are aware of any appropriate guidelines and opinions of people with visual impairments.

As advocated in this thesis, the most successful method to ensure provisions for people with visual impairments are made to best effect is to discuss and meet with people with sight difficulties and ask them what would encourage them to attend a museum and to have an enjoyable visit. Difficulties in facilitating information in this way cannot be denied, but sources of people with visual impairments who might be willing to assist with such a process should be investigated. Recourse to organisations mentioned in the above paragraph is a good starting point.

Working with visitors and potential visitors will ensure that museums are able to best prioritise what they need to do to encourage people who might not feel welcome into their audience, and therefore make a difference to their perception amongst the local community and, hopefully, amongst wider society as a whole. In this way, ideas adopted and adaptations made should be able to be sustained: people with visual impairments would prefer any provisions made for them to be long-lasting and not just associated with one particular exhibition. Sustainability is the key to making significant change. Such careful prioritisation will also assist with budgeting and time planning. In addition, meetings can begin a dialogue which can be continued into the future and will provide an opportunity for museums to discuss what they have done in the past and why, how much consideration has been given to issues of access for

[4] For more details about Re:source, see www.resource.gov.uk
[5] See www.rnib.org

people with disabilities, and why it has been of the importance, or otherwise, that it has. This again will take time but it could be time well-invested, particularly with the DDA coming into full enactment. Such consultation will also provide an opportunity for museums to explain what cannot be done, for example structural change for reasons of Listed status. If people with disabilities understand why change cannot happen, they might be willing to suggest suitable alternatives rather than not attend a museum at all.

Some institutions may feel that they have tried all they can but no visitors with visual impairments are coming through their doors, however much they comply with advice provided by the NMS Guidelines, the ADAPT Trust and similar bodies. The people with visual impairments who want to visit museums have a role to play in making museums in their local communities aware of any difficulties they experience in the design of their buildings and the presentation of exhibitions. Museums should help facilitate this by devising a mechanism for consultation as discussed above, and also by providing resources within their galleries, comments books, visitor surveys and similar. If museums do not receive any feedback from people with visual impairments when they do make provisions it can be frustrating and might discourage the prioritisation of such activity, but museums are fighting the prejudice people with visual impairments and disabilities in general feel when historically they have been disappointed by such visits, a reflection of the workings of the social model and an indication of the difficulties faced by museums as they try to play their part in the 'enfranchisement' of people with disabilities.

Museums are part of the cultural sector, and this sector is indeed charged with addressing social exclusion. By looking at the components of their audience and investigating working with people who might not otherwise feel museums have anything to offer them, groups believed to be excluded from a museum audience can be included. An understanding of the basic improvements to a museum building required, which can begin to facilitate this, needs to be ascertained and it is hoped, in this research, that these ideas have been addressed and some useful information found for the museum sector.

APPENDICES

AND

BIBLIOGRAPHY

APPENDIX A

MUSEUMS ASSESSED DURING THIS RESEARCH[1]

Region	Type of Museum
Highland	
Inverness Museum and Art Gallery	Local Authority
Grampian	
Aberdeen Art Gallery*	Local Authority
Marischal Museum, Aberdeen*	University
Tayside	
Dundee Contemporary Arts	Independent
McManus Galleries, Dundee*	Local Authority
Perth Museum and Art Gallery	Local Authority
J. D. Fergusson Gallery, Perth	Independent
Fife	
Laing Museum, Newburgh	Local Authority
British Golf Museum, St Andrews	Independent
Crawford Arts Centre, St Andrews	Independent
St Andrews Museum	Local Authority
St Andrews Preservation Trust Museum	Independent
Fife Folk Museum, Ceres	Independent
Crail Museum	Independent

[1] Museums with * indicate those which were visited with volunteers

Scottish Fisheries Museum, Anstruther	National
Buckhaven Museum	Local Authority
Corridor Gallery, Glenrothes	Local Authority
McDouall Stuart Cave, Kirkcaldy	Local Authority
Kirkcaldy Museum and Art Gallery	Local Authority
Burntisland Museum	Local Authority
Inverkeithing Museum	Local Authority
Dunfermline Museum and Art Gallery	Local Authority
Pittencrieff House Museum	Local Authority
Andrew Carnegie Birthplace Museum	Independent

Central

Smith Museum and Art Gallery, Stirling	Local Authority

Lothian

Talbot Rice Gallery, Edinburgh	University
Royal Museum, Edinburgh*	National
Museum of Scotland, Edinburgh*	National
National Gallery of Scotland, Edinburgh*	National
Scottish National Portrait Gallery, Edinburgh*	National
Museum of Childhood, Edinburgh*	Local Authority
Stills Gallery, Edinburgh	Independent
Collective Gallery, Edinburgh	Independent
City Art Centre, Edinburgh*	Local Authority
The Writers Museum, Edinburgh*	Local Authority

Strathclyde

Collins Gallery, Glasgow	University
Gallery of Modern Art, Glasgow	Local Authority
Kelvingrove Museum and Art Gallery, Glasgow*	Local Authority

Dumfries and Galloway

Gracefield Arts Centre, Dumfries — Local Authority

APPENDIX B

RESEARCH VOLUNTEERS AND VISITS

Grampian region - Aberdeen

Assessment of Aberdeen Art Gallery and Marischal Museum

Graham - Developed Retinal Pigmentosa in 1990, a hereditary disease. Vision fine until then but now has tunnel vision, good central vision but no peripheral vision. Recently had cataract operations and has one longsighted eye and one shortsighted eye. Spatial awareness is poor and he uses a white cane with a sign saying "Limited Vision" so people do not assume he cannot see at all.

Tayside region - Dundee

Assessment of McManus Galleries, Dundee

Richard - Has Diabetic Retinopathy. Sighted at birth but lost all sight in one eye and partially lost sight in the other in 1990 due to haemorrhaging in the eyes caused by Diabetes. Needs special magnifying glasses to read. Also studying visual impairment with reference to computers. Colour contrast is a particular interest. Is also a photographer so has an interest in art and museums. Worked at McManus Galleries as a volunteer for a short time when sighted.

Lothian region - Edinburgh

Assessment of Blind Alphabet C exhibition at Royal Museum of Scotland by Working Group of visually impaired people, National Museums of Scotland

Muriel - partially sighted

Rosalind - registered blind, uses a guide dog

Elaine - registered blind, uses a guide dog

Edna - registered blind, uses a guide dog

Fiona - partially sighted
Rosita - registered blind, uses white cane
Diane - partially sighted

Representatives for the Royal Museum:
Christine Thompson - Disability and Education Liaison Officer, Group Coordinator
Phillida Prosser - sighted museum guide, observer
Marion - sighted museum guide, observer

Assessment of Royal Museum audio guides and general assessment of this institution

Caroline - Has had Optic Atrophy from childhood. Vision is "unclear" - uncurable short-sightedness. Uses special magnifiers and has to get right up to text to read it. Works for Visual Impairment Services South East Scotland and has completed an eighteen-month course on visual impairment and rehabilitation. Visited museums and galleries as a child.

Assessment of Royal Museum of Scotland audio guides, and Museum of Scotland audio guides, as well as general assessment of both museums. Also general assessment of Museum of Childhood

Janet - Has continuing retinal deterioration, resulting from incurable disease contracted in early adulthood. Uses a wheelchair and vision is double. Life-long museum and gallery visitor and works for the Lothian Coalition for Disabled People.

Assessment of Scottish National Portrait Gallery, and audio guides at National Gallery of Scotland

Sheena - Lost all sight in 1990 after an operation to correct vision. Uses a guide dog.

Assessment of Cramond Lioness exhibit at the Museum of Scotland and general assessment of this institution

Rosita - Registered blind, possible residual sight. Uses white cane.

Jim - Visually impaired since birth.

Brian - Visually impaired since birth.

Mel - Sighted until 1991 when Macular Degeneration began in one eye; this occurred in the other eye in 1994. Has better peripheral than central vision.

Other regions

Fife - Fife Society for the Blind was contacted and provided the names of two volunteers who were possibly interested to help this research. One volunteer proved impossible to contact and the other had no sight and there was no suitable venue to visit. Therefore information received from an earlier study of museums in Fife for a dissertation forming part of a Museums and Galleries Diploma is utilised here. Knowledge gained from visually impaired volunteers who visited other institutions with me has also been applied to Fife organisations.

Strathclyde - Museums and galleries here were assessed with the received knowledge of visits with my visually impaired volunteers to other institutions. One visit to Kelvingrove Museum and Gallery was to attend a conference given by the ADAPT Trust, including assessments of the institution by people with visual impairments.

Highland, Central, Dumfries and Galloway - It was not possible to carry out significant levels of accompanied research in these areas due to the lack of availability of volunteers.

DATES MUSEUMS VISITED WITH VOLUNTEERS

2nd December 1998	Booker, Janet, Lothian Coalition of Disabled People, and Caroline Hextall, VISSES, Royal Museum of Scotland, Edinburgh
3rd December 1998	Gledhill, Richard, McManus Galleries, Dundee
9th December 1998	Craig, Sheena, National Gallery, Edinburgh
11th December 1998	Green, Rosita, and Green, Jim. and Mel and Brian, Museum of Scotland, Edinburgh
16th December 1998	Booker, Janet, Lothian Coalition for Disabled People and Hextall, Caroline, VISSES, Museum of Scotland, Edinburgh
27th January 1999	Booker, Janet, Lothian Coalition of Disabled People, Edinburgh, Museum of Childhood
9th February 1999	Booker, Janet, Lothian Coalition of Disabled People, Museum of Scotland, Edinburgh
18th February 1999	Finlay, Graham, Senior Social Worker and Deputy Executive, Grampian Society for the Blind, Aberdeen Art Gallery, and Marischal Museum, Aberdeen
7th December 1999 18th February 2000	Blind Alphabet C guides, Edinburgh

APPENDIX C

QUESTIONNAIRE SENT TO THE FIFE MUSEUMS LISTED IN APPENDIX A FOR THE DISSERTATION COMPLETED IN 1997-1998

Questionnaire.

I hope that this questionnaire will take no more than 5-10 minutes to complete. I have tried as far as possible to keep the questions to yes and no answers; in such cases, please encircle your response. In the course of my research, I hope to visit your museum and I would be very grateful if it would be possible for me to meet with you. If you would be willing to arrange this, please could you indicate this at the end of the questionnaire.

Thank you for taking the time and trouble to help me in my research.

**What is your total number of staff?

.....

**What type of collections do you have?

.....

Are you/your staff aware of the Disability Discrimination Act 1995? **Yes/No

Do you have a written policy on access and provision for disabled people related to staff and visitors, endorsed by your governing body? **Yes/No

- if you do not have such a policy, are you planning to implement one? **Yes/No**

If you have a policy, do you require all organisations who use your museum facilities to comply with it? **Yes/No

Do all staff have copies of the policy, or are they aware of any discussions to implement one? Policy - **Yes/No Discussions - **Yes/No**

**Are your staff trained or advised, regardless of having a policy, in helping

disabled visitors? **Yes/No**

Do you have a (Disability) Access Officer or a designated member of staff responsible for such issues? Officer - **Yes/No Staff responsible - **Yes/No**

**What provisions do you make for disabled people regarding facilities within your museum and to make exhibitions more accessible? (eg public conveniences; audio guides)

.....

.....

.....

**How are any facilities/provisions you have for disabled people advertised, both inside and outside your museum? (eg signs, advertising literature)

.....

.....

- to whom do you distribute advertisements of your museum externally? (eg hotels)?

.....

.....

Do you charge admission to your museum? **Yes/No

- are disabled people considered in your pricing policy? **Yes/No**

Are helpers who come with disabled people charged a similar rate? **Yes/No

Do you liaise with local disabled groups? (eg regarding ideas for any provisions/design of exhibitions) **Yes/No

Do you have visits by disabled groups? **Yes/No

Do you offer tours for people with specific disabilities? **Yes/No

- which disabilities?

.....

Do you make provision for disabled people in any outreach work? **Yes/No

Do you have car-parking close by? **Yes/No

If not, can parking arrangements be made for disabled drivers? **Yes/No

Do you keep a periodic (daily, weekly) record of your visitors? **Yes/No

Are there any comments from disabled people in a Visitors' Book? **Yes/No/Don't Know

**Is your Emergency Procedure accessible to all disabled people? (eg lights as well as a bell for Deaf visitors)

.....

.....

Are guide dogs admitted to your museum? **Yes/No

Do you use Braille? **Yes/No

Have you ever made a grant-aid application with regard to a project for disabled people? **Yes/No

- what was the project?

.....

If yes to the above, were you successful? **Yes/No

Would it be possible for me to arrange to meet with you some time in the early New Year? **Yes/No

APPENDIX D

MPs AND MSPs CONTACTED[2]

MPs

Boateng, Rt Hon Paul	Brent South Parliamentary Under-Secretary of State Department of Health 1997-1998
Boswell, Timothy Eric*	Daventry Parliamentary Under-Secretary of State Department of FE 1992-1995
Bowis, John, Crocket*	MEP, London Region Parliamentary Under-Secretary of State Department of Health 1993-1996
Burns, Simon Hugh McGuigan	Chelmsford West Parliamentary Under-Secretary of State Department of Health 1996-1997 Opposition spokesman on Social Security 1997-1998
Burt, Alistair James Hendrie*	Bury North 1983-1997 Consultant, Whitehead Mann plc Minister of State (Minister for Disabled

[2] Contacts suggested by House of Commons Information Office and Scottish Parliament Information Office. The responsibilities listed are those held during the creation and introduction of the DDA .
The '*' indicate those who replied to my letters.

	People) 1995-1997
Darling, Rt Hon Alistair Maclean	(Lab) Edinburgh Central Secretary of State for Social Security 1998 - 2001
Dorrell, Rt Hon Stephen James*	Charnwood Secretary of State for Health 1995-1997
Hague, Rt Hon William Jefferson	Richmond Minister for Social Security and Disabled People 1994-1995
Hooper, Baroness*	Liverpool and St James in the City of Westminster Parliamentary Under-Secretary of State Department of Health 1989-1992
Hutton, John Matthew Patrick	Barrow and Furness Parliamentary Under-Secretary of State, Department of Health 1998
Lilley, Rt Hon, Peter Bruce*	Hitchin and Harpenden Secretary of State for Social Security 1992 - 1997
Yeo, Timothy Stephen Kenneth*	Suffolk South Parliamentary Under-Secretary of State Department of Health 1992-1993

MSPs

Baillie, Jackie	MSP (Lab) Dumbarton Deputy Minister for Communities 1999 - 2000
Brankin, Rhona*	MSP (Lab) Midlothian Deputy Minister for Culture and Sport 1999 - 2000
McGugan, Irene, Margaret*	MSP, (SNP), North East Scotland Member Equal Opportunities Committee and Disability Reporter 1999-2000
Matheson, Michael*	MSP, (SNP) Central Scotland Convenor Cross-Party Group in the Scottish Parliament on Disability Opposition spokesman for justice and equality 1999-2000

APPENDIX E

SEMINARS AND CONFERENCES ATTENDED

November 1997	"Including Disabled People in Arts Venues" organised by Disability Scotland
November 1998	Scotland's Best, Welcome Host training, St Andrews
December 1998	*Dialogue in the Dark Conference*, The ADAPT Trust, Kelvingrove Museum and Art Gallery, Glasgow
December 1998	RNIB Scotland training for guiding people with visual impairments organised by Fife Society for the Blind
February 1999	*INTACT Seminar - Access in Mind,* Scottish Museums Council, St Andrews
September 1999	Museums Association Conference, Edinburgh
October 1999	RNIB training for including students with disabilities, University of St Andrews
October 1999	"Whose Disability?", organised by Napier University, Edinburgh Festival Theatre
November 1999	"Museums in the Learning Age", National Museums of Scotland

January 2000	"Art Galleries, Aesthetics and Social Inclusion", University of Glasgow
March 2000	"Inclusion", International conference, University of Leicester
November 2000	"Open Sesame", The ADAPT Trust, Dundee Contemporary Arts, Dundee
January 2001	"Accessibility and Web Design", RNIB Scotland and Web Accessibility Initiative, University of St Andrews
March 2001	"Employment Legislation" Scottish Centre for Cultural Management and Policy, Edinburgh
April 2001	"Reaching into the Communities", Scottish Centre for Cultural Management and Policy, Edinburgh
May 2001	*Art as Archaeology Archaeology as Art,* Society of Antiquaries of Scotland Rhind Lectures 2001, Professor Colin Renfrew, Royal Museum of Scotland, Edinburgh Lecture 3 - "Off the Plinth: Display and Process in Archaeology and Art"
June 2001	*Scotland's National Cultural Strategy - What's Next?*, Centre for Cultural Policy, Glasgow
July 2001	*Making Sense of the Senses*, Museums And Galleries Disability Association, London

APPENDIX F

MUSEUM AND OTHER PROFESSIONALS CONTACTED[3]

Meetings

Appleton, Ian, The Appleton Partnership, Edinburgh, 25th February 1999

Atherton, David, Cultural Services Officer, Aberdeen City Council, Aberdeen Art Gallery, Aberdeen, 18th February 1999

Bourbouze, Marion, Audience Development Initiative, Edinburgh, 15th October 1998

Bright, Keith, & Cook, Geoff, University of Reading, 28th September 1998

Eggleton, Russell, & Herman, Alison, Royal Museum of Scotland, Edinburgh, 4th February 1999

Fisher, Pat, Assistant Curator, Talbot Rice Gallery, Edinburgh, December 1998

Grieg, Elaine, The Writers Museum, Edinburgh, 4th February 1999

Hegyi, Francesca, Education and Interpretation Officer, Scottish Museums Council, Edinburgh, 19th February 1999

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[3] Does not include correspondence with MPs/MSPs - please see Appendix D

Hughes, Megan,	Chairman of Artsense, Chapman Gallery, University of Salford, 28th October 1998
Longthorne, Annabel,	Chapman Gallery, University of Salford, 28th October1998
Newland, Kate,	Curator Scottish Fisheries Museum, 10th March 1999
Suttie, Alan,	Chief Executive, *Fife Society for the Blind* meetings in 1997 and 1998
Thompson, Christine,	Disability and Education Liaison Officer, National Museums of Scotland, Edinburgh, several meetings 1998 - 2000

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Appleton, Josie.,	Institute of Ideas, 2nd March 2001
Atherton, David.,	Aberdeen Art Gallery, 17th March 1999 and 27th April 2000
Booker, Janet,	Lothian Coalition of Disabled People, 8th October 1998
Bretherton, Julia,	The Bretherton Consultancy, January 1999
Cassim, Julia,	13th October 1998
Cavanagh, Dot,	Help Desk Administrator, Scottish Arts Council, 3rd May 2000

Chamberlain, Diane, University of Reading,
2nd February and 22nd February 1999

Coles, Alison, Museums and Galleries Commission, London, May 1998

Coulter, Stewart, The ADAPT Trust, 23rd August 1999

Devaney, Maria, Smith Museum and Art Gallery, Stirling,
5th May 2000

Dickinson, Chris, University of Manchester Institute of Science and
Technology, 21st and 22nd October 1998

Edgar, Lisa, Education Development Manager, Ffotogallery, Cardiff,
Wales, regarding "*I*", 5th May 2000

Editor, Dunfermline Talking Newspapers, 6th May 2000

Editor, Dazed & Confused, 3rd December 1999

Editor, Mid - Fife Talking Newspaper, 6th May 2000

Frame, Robbie, Antenna Audio, Edinburgh, 26th August 1999

Gilkes, Alison, National Museums of Scotland, 25th September 1998

Goldberg, Larry, CPB/WGBH National Center for Accessible Media,
25th August and 24th November 1998

Grieg, Elaine, Curator, The Writers Museum, Edinburgh,
1st February 1999, 19th and 22nd January 2001

Hamilton, Laura, Collins Gallery, regarding Changing Perceptions exhibition, 2nd May 2000.

Ionides, Julia., The Dog Rose Trust, 13th and 14th October 1999 and 19th March and 23rd April 2000

James, Alison, Freelance consultant, 6th July 1998

Kilgour, Elaine, Training Manager, Scottish Museums Council, 3rd September 1999

Kirby, William, 7th January 1998

McGinnis, Rebecca MAGDA, 17th June 1998

McGowan, Sue, Royal Institute of British Architects, 9th August 1999

McGregor, Carol, International Audio Describers Agency, 29th November 1999

Majewski, Jan, Smithsonian Institution, 21st August 1998

Marwick, Sandra Education Officer, City Art Centre, Edinburgh 25th March 2000

Milliner, Leonie, Royal Institute of British Architects, 6th and 16th August 1999

Miller, Lesia, Information Technology Services, University of St Andrews, 19th January 2001

Moran, Rebekah, British Museum, 11th January 2001

Nolan, Gail,	Museum Of the Moving Image, 21st August and 13th October 1998
Picton, Susan,	MAGDA, 24th June 1998 and 9th September 1999
Priddy, Sarah,	House of Commons Information Office, 28th April 2000
Quinault, Wendy,	Disabilities Adviser, Student Support Service, University of St Andrews, 9th September 1999 and 12th April 2000
Slater, Deborah,	Public Information Office, The Scottish Parliament, 7th September 1999
Smith, Eunice,	Braille Unit, Edinburgh, 25th February 1999
Strachan, Yvonne,	Equality Unit, Scottish Executive, 20th April 2000.
Tarbet, Graeme,	Dundee Talking Newspaper, 6th June 2000
Thompson, Christine,	Disability and Education Liaison Officer, National Museums of Scotland, 24th June 1998
Tyrell-Kenyon, Vanessa,	The Spectator Librarian, 11th January 2001
Ward, Fiona,	House of Commons Information Office, 10th September 1999
Warrilow, Jane,	Assistant Keeper Fine Art (Touring Exhibitions), Edinburgh City Art Galleries, 5th June 2000

Wastle, John, Education Department - Arts, Culture & Sport, Scottish Executive. 31st May 2000. (enclosing notes from meeting between Iain Gray, Deputy Minister for Community Care and Jackie Baillie, Deputy Minister for Communities and Representatives from Disability Organisations 24th September 1999)

Weisen, Marcus, Royal National Institute for the Blind, 29th March 2000

Wilson, Elaine, The ADAPT Trust, 30th November 1998 and 30th August 1999

Wlodkowski, Tom, CPB/WGBH National Center for Accessible Media, 30th November 1998

Young, Clara, McManus Galleries, Dundee, 28th October 1999

Young, Toby, The Spectator website, 10th and 11th January 2001

APPENDIX G

SAMPLE INTERVIEW TRANSCRIPT[4]

Venue: The Archaeology Gallery, McManus Galleries, Dundee
Date: 3rd December 1998
Volunteer: Richard
Visual Impairment: Diabetic Retinopathy. Sighted at birth but lost all sight in one eye and most of the sight in the other due to diabetes. Had "relatively good" sight before this.

(Interview recorded on dictaphone, with Richard's consent, whilst walking around the Archaeology Gallery)

Heather (H) - Hello Richard, thank you for coming and agreeing to help me with my research.

Richard (R) - Well, I hope I can be of some help to you.

H - I will just run through the idea behind this meeting again, so we are both clear what is happening. My aim from this interview is to experience a normal visit for you, looking at the topics I suggested when we spoke initially. I have several topics I would like to cover with you to get some ideas about what you perceive as good examples and what you think are examples of bad provisions for people with visual impairments, things that make the visit difficult. Is that OK?

R - Yes. Sounds fine. Like I say, I hope I can be of some help.

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[4] Conventions in written presentation taken from: J. Mason, *Qualitative Methodology*, 1996, p.116. Pauses are indicated as (...) Punctuation is added as faithfully as possible to the interview to make it intelligible for the reader.

H - I'm sure you will be! I'll just go through the topics for discussion, if you like. I am interested in how you find negotiating a museum in terms of the architecture, by which I mean the entrance door, steps, stairs inside, ramps if relevant etc. Also, the wall and floor design, for example, does the floor have any changes in surface to aid orientation, that type of thing. The colour contrast idea comes into the design of the architecture as well, for example being able to find the door against the wall because they are different colours, that sort of thing. I would like to look at issues of lighting too, and then more into the way that exhibitions are designed, textual information, labels and so on, any opportunities to use touch, any audio guides or other uses of sound, and then whether there are any warders around, or whether guided tours are offered. Does that make sense to you?

R - Yes, fine.

H - OK. Can I sart by asking how you found the approach to the gallery.

R - Well, the ramp is good, it is smooth to walk up, easier than the few steps although I can use those quite easily.(...)The door is heavy to pull but the handle is easy to find and hold.

H - You could easily find the door, if you see what I mean?

R - (...) Oh yes, the wood stands out from the brick, you mean, yes there is a tonal contrast there, different shades of brown, I suppose.

H - OK, thank you. Lets go to the archaeology gallery.//

R - I find it difficult to navigate strange places. I have visited this gallery before but I still find it difficult moving towards the gallery where the archaeology is from this gallery(...) which gallery is this? 'Discovering Tayside', is it, I think I remember? The lighting now we are approaching the door to the gallery is very

low, I only have minimal sight in one eye so I have to walk slowly and I am really not sure where I am as I can't see the door yet.

H - We are almost there. The lighting is low here as you say. Have you visited here previously on your own or would you usually visit with other people?

R- I am independent and always have been. There shouldn't be a reason why I can't visit a museum on my own. At least, that's how I feel. Obviously, it is difficult for me sometimes but I want to be able to appreciate exhibitions, I was a regular visitor before I lost my sight. Anyway, here's the main point of our visit, the archaeology.(...) I know sometimes it is down to aesthetics of display, isn't it., but now that we are in the gallery, it is still quite dark for me. My eyes take a long time to adjust to the change.

H - I would guess this is low lighting because it is meant to represent underground.

R - It certainly feels like it at the moment!

R - I know I am jumping to another of the topics but the labelling over there, in that case. It looks like guns or something but I cannot get close enough to those tiny labels to read them. They are right at the back and the text is far too small.

H - That's fine to move round the topics, don't worry. I was going to ask about the position of labels and text size.

R - Well, a lot of people think blind people, visually impaired people, need Braille. But that isn't always useful for people who lose their sight later in life...I can't read it but I know the shape of letters so tactile labelling would help me. I have hands which I can feel letters with and there is plenty of space below that case I was talking about to add something like that. I stop reading labels if I can't read the first two or three. It is too tiring.

H - To move back to architecture, the floor in the gallery is sloping like a ramp, what do you think of this floor design.

R - This gallery has several changes in floor design. And there seems to be no warning. I agree that changes of floor level can be helpful to warn you you are moving ot a different room or whatever, but the surface needs to change too, otherwise it makes me very wary.(...) Ah, this is a large case, the lighting is quite bad here still, but it is spotlights this time, reflecting off the glass(...) Can you see what is inside?

H - It's a map I think.

R - Ah yes, but I cannot read the information on it. I am interested in local history but that is no good to me at all. (...) and I can't tell what is in that case. I can see something brown, I would guess a piece of pot from the subject matter of the gallery we are in, but the cloth around it is all rumpled up and it is difficult to see if there is an exhibit in there. A background of a contrasting colour would be a really good idea. I know there might be the issue of aesthetics but browns and earthy colours are not all the same shade. Colour contrast doesn't need to be a completely different colour!

H - How do you feel about colour as regards the architectural design in here?

R - Well, there is the orangey-brown floor and the walls are paler blue, so it is not too bad(...) the gallery is quite full of cases and objects so I can tell where the floor is and where the walls are by the business of the cases.

H - Do you use the floor for navigation round rooms in museums?

R - Floor surfaces can be useful to tell you where you are going. You can recognise the sound, for example, or some people listen to their feet to find out their direction, or they navigate by looking at their feet. Similarly people look at

ceilings, or into corners. I don't do any of those.

H - OK(...) What about the light in this area of the gallery?

R - Well, it is better because there are windows here which allow natural light which is good as my eyes find it easier, but the window is behind an exhibit so the whirring images through it are very distracting.

R - Now, here is something, a huge case I almost walked into. I can't really tell it is a case, I worked it out because I just caught your reflection. I was going to walk straight forward and in to it, there is no definition on the glass at all. This sort of situation is difficult for people with very low vision - it is very disorientating when you realise what you thought was a way out actually isn't one.

H - So,what would you say causes this disorientation?

R - Poor lighting and poor colour contrast. Huge expanses of glass like this are dangerous without something stuck on it somewhere to warn you. Can I talk a little more about colour here? This case here, the labels are white text on a colourd background - I find that impossible.

H - Reversed out text, it's called, I think

R - Yes, that's right. It is much better to use black text on a white background, like most of the labels in here, to be fair, but the type id too small in most cases.

H - It seems that text is the only interpretive aid for this exhibition.

R - Well, there was some sound in the exhibition near to the case with the guns in. But I find sounds like that distracting, extraneous sounds, I am never surre if someone is talking to me, it's part of the exhibit, or what.

H - What do you think of the use of sound in general in museums?

R - Tape tours have to be done really well. And they should never try to give direction - take 10 steps forward and you will see...no good at all! But I enjoy audio guides if they are done well, I find them useful.

H - We're over halfway round now - what do you think of this text here, at the front of this case?

R - This text is better as it is near the front of the case - but it is poorly lit and I am still having difficulty reading it despite it being close. And it is through glass of course. Like I said before, tactile labels on the wall by the side of cases or underneath cases which are quite tall, even large print reproductions or something, make the use of the space.

H - Have you ever seen anything like this?

R - Not exactly, there isn't much thought given to touch and tactile lettering in my experience.

H - What do you think of touch facilities then?

R - Great. I come to museums to learn and to do that I need to touch! Like this stone here that we've come to. This stone is not behind glass. I am going to touch it because I get so frustrated with not being able to get a proper feel of what things are like. I know I am not supposed to touch but it is so frustrating. I am sure there'll a small label around somewhere saying not to touch but I can't see it...

H - There is one!

R (laughs) I thought so! I am always happy to discuss why I am touching what I

am not supposed to if anyone wants to ask me

H - There are no warders around, are there, anyway?

R- There aren't any warders round here to ask about permission to touch. If I didn't know the gallery I might be quite concerned that I can find no one to ask a question.

H - Well, that's us, we have been all the way round.

R - Did I cover everything for you? We discussed all the topics didn't we?

H- Yes, with reference to this gallery, a lot of the things seemed quite repetitive, low lighting, poor label position...

R - Yes, but there were some good labels by the stones, wall panels, I suppose, good contrast. It is a shame there wasn't more tactile pieces here, that's what museums need to look at!

H - Thank you very much for your time, Richard, you have provided some useful points here.

R - Thank you for inviting me to help!

(Interview end)

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